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**Proceeding of The 1st Annual Conference of Midwifery**

**Undergraduate Of Midwifery, Faculty of Medicine, Universitas Andalas**

# “ Women Centre Care “

**October, 31 2019**
**Padang, West Sumatera, Indonesia**


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**Feni Andriani**
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# Preface

This conference aims to maintain friendship among midwifery in Indonesia and introduce the Midwifery Faculty of Medicine, Universitas Andalas in the eyes of the world. Creating midwives and midwife students in Indonesia to help prepare themselves and participate in entrepreneurship in midwifery service. Facilitate the formation of a network of midwives and midwife students as a forum to exchange ideas about entrepreneurship in midwifery services so as to enable prospective midwives to have a major impact on midwifery services.

In carrying out their role the midwife has confidence that is used as a guide in providing care. These beliefs include beliefs about pregnancy and childbirth as a natural process and not a disease. Where midwives provide high-quality antenatal and postnatal care care to maximize women's health during and after pregnancy, detect problems early and manage or refer for any complications. Midwives are recognized as professionals who are responsible for establishing partnerships with women to provide the support, care and advice needed during pregnancy, childbirth and the postpartum period, to deliver births at the responsibility of the midwife herself and to provide care for newborns, infants and toddlers . These treatments include preventative measures, promotion of normal births, detection of complications in mothers and children, access to medical care or other appropriate assistance, and the implementation of emergency measures. Midwives have important duties in counseling and health education, not only for women, but also in the family and community.

The Conference has done successfully by presenting speakers from different departemen and university in Indonesia. It has became a scientific platform to disscuss the current issues on midwifery science. Besides, the conference has gathered many papers during the conference. This Proceeding is a publication of a selected papers from ths conference which provide insight about current issues of midwifery in Indonesia. We hope the proceeding could be reliable resource to know the current issues of Midwifery.

**Editor**

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# The Relationship of Hemoglobin Levels with Dysmenorrhea Pain Scale in Female Adolescent Islamic Boarding School in Sumani, Solok Regency

**Elly Usman[1] Erda Mutiara Halida[2] Chentya Ade Putri[2]**

[1]*Department of Pharmacology , Faculty of Medicine, Universitas Andalas, Indonesia*
[2]*Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas Padang, Indonesia*
[3]*Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
ellyusman@med.unand.ac.id[1]

**Abstract**

Dysmenorrhea is the most common menstrual problem in young women. Dysmenorrhea can occur due to various factors, one of which is the lack of hemoglobin levels in the blood. This study aims to determine the relationship of hemoglobin levels with dysmenorrhea pain scale in female adolescent Islamic Boarding Schools in Sumani, Solok Regency.

This study used a cross sectional approach, conducted at the Aurduri Sumani Islamic Boarding School, from February 2019 to July 2019. The population of the study was 113 people with a total sample of 95 people taken by proportional random sampling. Retrieval of data in the category of hemoglobin levels by examining respondents' Hb levels by health workers and in the category of dismneore pain using observation sheets.

The results of this study indicate that in adolescent girls with hemoglobin levels ≥12 gr / dL, 71.9% more experienced mild pain compared to 3.5% had moderate dysmenorrhea, while those with hemoglobin levels <12 gr / dL obtained more results 36.8 % had moderate pain compared with 5.3% had no pain. Chi-square test results obtained p value = 0.00 ($p \leq 0.05$), this shows that there is a relationship between hemoglobin levels with dysmenorrhea pain scale.

**Keywords** : Menstruation, Dysmenorrhea, Hemoglobin

## INTRODUCTION

Dysmenorrhea (dysmenorrhoea) comes from the Greek language which consists of dys (severe disruption or pain / abnormality), meno (month) and rrhoea which means flow (flow). So based on the origin he said dysmenorrhea is menstrual blood flow disorders or menstrual pain. Dysmenorrhea is pain in the pelvic area due to menstruation and the production of prostaglandins. Dysmenorrhea often begins 1-3 years since menarche or menstruation first time and occurs on average at the age of 12.5 years (Hendrik, 2006).

According to Reeder (2013) in Yunitasari (2017) dysmenorrhea is characterized as brief pain before or during menstruation, while according to Hendrik (2006) dysmenorrhea is a problem that often occurs in women who are experiencing menstruation or menstruation. Based on these two opinions, Yunitasari (2017) concluded that dysmenorrhea is a physical disorder during menstruation, which is characterized by the presence of pain that occurs before or during menstruation in a short time (Yunitasari, 2017).

Dysmenorrhea is divided into primary dysmenorrhea and secondary dysmenorrhea. Primary dysmenorrhea occurs without problems in the reproductive system, and is related to the ovulation cycle. Primary dysmenorrhea occurs due to the production and secretion of prostaglandins by the endometrial secretion phase that causes uterine muscle contractions (myometrium) resulting in ischemia (Prawirohardjo, 2011). Whereas secondary dysmenorrhea is menstrual pain caused by a pathological state of the reproductive organs, which can occur at any time after menarche and is found on average at ages 25-33 years (Dewi, 2012).

The incidence of dysmenorrhea is quite high throughout the world. According to WHO data, the average incidence of dysmenorrhea in young women is between 16.8–81%. In European countries

dysmenorrhea occurs in 45-97% of women, with the lowest prevalence in Bulgaria (8.8%) and the highest reaching 94% in Finland (Kusmiran, 2011). In the United States around 15% of young women report experiencing severe dysmenorrhea and are recognized as the most frequent cause of absence from school, in addition based on the results of a survey of 113 women in the United States it was stated that the prevalence of dysmenorrhea was 29-44% (Kasdu, 2005).

The prevalence of dysmenorrhea in Indonesia itself in 2008 was stated at 64.25% consisting of 54.89% of primary dysmenorrhea and 9.36% of secondary dysmenorrhea (Santoso, 2008). Meanwhile in West Sumatra there are no definitive data on the incidence of disminore, but in Putra's research entitled The Effect of Mozart Music Therapy on Menstrual Pain Degrees in Young Women in MAN 2 Padang Japang in 2014 revealed the prevalence of dysmenorrhea in West Sumatra reached 57.3 % (Putra, 2014).

Previous research conducted by Febri Monica Titia (2017) with the title Relationship Characteristics of Adolescent Girls with Primary Dysmenorrhoea Occurrence in Class X and XI Students in SMAN 1 Padang City in 2017 showed that of 106 female students who became respondents 74.5% of them experienced primary dysmenorrhea (Titia, 2017). Other research conducted by Nelawati (2006) with the title Relationship Knowledge Levels of Menstruation with Dysmenorrhea Degrees in high school students in Padang in 2015 showed that of 245 students, 74.3% had mild dysmenorrhea, 19.2% of students had moderate dysmenorrhea, and 6.5% experience severe dysmenorrhea (Nelawati, 2006).

According to Proverawati and Misaroh (2009), women who are at risk of experiencing disminore include women who smoke, women who drink alcoholic drinks or soda during menstruation, women who menstruate before age 11 years and there is a history of menstrual pain in the family (Proverawati and Misaroh, 2009) . In addition, other factors that often cause dysmenorrhea in women are reduced levels of hemoglobin (Vitiasaridessy, 2014).

Hemoglobin (Hb) is a heme binding protein O2, CO2 and protons. This tetrameric protein is found in erythrocytes. Hemoglobin functions as a protein O2 pengakut from the lungs to all body tissues as well as giving a red color to erythrocytes. Hb has a vital function, so do not be surprised if there is a decrease in Hb levels in the blood to be below the normal limit, then the body can not work properly (Dean L, 2005).

Dysmenorrhoea can occur due to increased levels of prostaglandins in the blood resulting in stimulation and decreased blood flow to the myometrium. This decrease in blood flow causes an increase in contractions and dysr

hythmias in the uterus so that blood flow to the uterus is reduced and hypoxia. Decreased oxygen levels occur because hemoglobin levels in the bloodstream also decrease, this results in a decrease in the pain threshold in the afferent nerve pelvic nerve. That is, the lower hemoglobin levels in adolescent girls, the more easily experience dysmenorrhea (Vitiasaridessy, 2014).

Based on BPS West Sumatra data in 2017 concerning the Number of School Age Populations According to Gender, the number of adolescent girls in Solok Regency is in the fifth position after Pasaman Barat, Pesisir Selatan, Agam, and Kota Padang (BPS West Sumatra, 2017). Based on these data the researchers decided to conduct research in Solok Regency with consideration of the distance to the city of Padang and the absence of research on dysmenorrhea in the Solok Regency.

Preliminary survey conducted by researchers in three schools in X Koto Singkarak District, Solok Regency, namely SMAN 1 X Koto Singkarak, MAN 1 X Koto Singkarak and Aur Duri Islamic Boarding School, on 16 February 2019 and 5 April 2019 through interviews with 10 students from each each school, found 3 students from SMAN 1 X Koto Singkarak experienced moderate menstrual pain but did not interfere with its activities, 4 people claimed to experience mild pain and 3 others did not experience pain at all. The survey results on 10 female students at MAN 2 Solok stated that 5 people experienced moderate menstrual pain with an irregular range of events, and 5 others only experienced mild menstrual pain. Meanwhile, 3 female students at the Darussalam Islamic Boarding School Aur Duri said they experienced severe menstrual pain that disrupted their activities, 5 students claimed to have moderate menstrual pain while 2 other students claimed to experience mild menstrual pain.

Based on the above phenomenon, researchers are interested in examining the relationship of hemoglobin levels to the scale of dysmenorrhoea pain in girls in Pondok Pesantren in Sumani, X Koto Singkarak District, Solok Regency, West Sumatra.

## I. METHOD

This type of research is an analytic study with cross sectional design. Data collection was carried out from February to July 2019. The population in this study were all young women in Islamic boarding schools in Sumani, amounting to 113 people. The size of the study sample was 95 subjects. Sampling was done by proportional random sampling technique. Data processing was performed by chi square test ($p < 0.05$).

## II. RESULTS

Characteristics of the respondents involved in this study include the age of menarche, menstrual length, and family history of dysmenorrhea. The frequency distribution of respondent characteristics is presented in Table 5.2.

**Table 5.2 Frequency Distribution of Respondent Characteristics**

| Respondent Characteristics | f | % |
|---|---|---|
| Menarche Age | | |
| ≥ 12 Years | 90 | 94,7 |
| < 12 Years | 5 | 5,3 |
| Long Period | | |
| 3-7 day | 95 | 100 |
| <3 / >7 day | 0 | 0 |
| Family History Of Dysmenorrhea | | |
| There is | 48 | 50,5 |
| There isn`t | 47 | 49,5 |
| **Total** | **95** | **100** |

Based on table 5.2 above shows that the total respondents who met the inclusion and exclusion criteria were 95 people, consisting of 94.7% with menarche age greater than 12 years while 5.3% had menarche at the age of 12 years. The duration of menstruation in all respondents is 3-7 days. In a family history of dysmenorrhea 50.5% of respondents had a family history of dysmenorrhea, and another 49.5% had no family history of dysmenorrhea.

**Univariate Analysis Results**

**Table 5.3 Frequency Distribution of Female Adolescent Dysmenorrhea Pain Scale**

| Dysmenorrhea Pain Scale | f | % |
|---|---|---|
| No Pain | 10 | 10,5% |
| Mild Pain | 50 | 52,6% |
| Moderate Pain | 16 | 16,8% |
| Severe Pain | 19 | 20,0% |
| **Total** | **95** | **100%** |

Table 5.2 shows that 52.6% of young women who experience dysmenorrhea are in the mild pain scale category.

**Table 5.4 Distribution of Frequency of Female Adolescent Hemoglobin Levels**

| Hb Level | f | % |
|---|---|---|
| Hb Level ≥ 12 gr/dL | 57 | 60% |
| Hb Level < 12 gr/dL | 38 | 40% |
| **Total** | **95** | **100%** |

Based on table 5.4 above, it can be seen that 60% of young women have hemoglobin levels ≥12 gr / dL.

**Bivariate Analysis Results**

**Table 5.5 Relationship of Hemoglobin Levels with Dysmenorrhea Pain Scale**

| Hb Level | Dysmenorrhea Pain Scale | | | | | | | | | *p-value* |
|---|---|---|---|---|---|---|---|---|---|---|
| | No Pain | | Mild | | Moderate | | Severe | | Total | |
| | f | % | f | % | f | % | f | % | f | |
| ≥12 gr/dL | 8 | 14,0% | 41 | 71,9% | 2 | 3,5% | 6 | 10,5% | 57 | 0,00 |
| <12 gr/dL | 2 | 5,3% | 9 | 23,7% | 14 | 36,8% | 13 | 34,2% | 38 | |
| **Total** | **10** | **10,5%** | **50** | **52,6%** | **16** | **16,8%** | **19** | **20,0%** | **95** | |

Based on table 5.5 above it can be seen that the hemoglobin level <12 gr / dL is more (36.8%) with moderate dysmenorrhea pain category compared to the painless category (5.3%), whereas at hemoglobin level ≥12 gr / dL more many (71.9%) with mild dysmenorrhea pain category compared with moderate dysmenorrhea pain categories (3.5%).

Statistical analysis showed that there was a significant relationship between hemoglobin levels and dysmenorrhea pain scale, with the acquisition of chi-square p = 0.00 (p≤0.05). It can be concluded that there is a relationship between hemoglobin levels with dysmenorrhea pain scale.

## III. DISCUSSIONS

### Dysmenorrhea Pain Scale

Based on the results of research conducted on 95 young women in Islamic boarding schools in Sumani, Solok Regency in 2019 showed that more than half of young girls experienced dysmenorrhea, namely 85 people, with 50 (52.6%) people experiencing mild dysmenorrhea, 16 (16.8 %) people experience moderate dysmenorrhea and 19 (20.0%) people experience severe dysmenorrhea while 10 (10.5%) other people do not experience dysmenorrhea.

The results of this study are in line with previous studies conducted by Nelawati (2006) with the title Relationship of Knowledge Levels of Menstruation with Dysmenorrhea Degrees in High School Girls in Padang in 2005 which showed that of 245 students experienced the most mild dysmenorrhea, with 74.3% experiencing mild dysmenorrhea, 19.2% of students had moderate dysmenorrhea, and 6.5% had severe dysmenorrhea (Nelawati, 2006).

This can occur due to the influence of age of menarche and family history of dysmenorrhea. Menarche is an index of physical maturation of a woman's reproductive organs. In the study of Chatu et al in Larasati (2016) it was mentioned that menarche generally occurs at the age of 12-14 years. Based on a national survey, the average age of young menarche girls in Indonesia is 12 years with a prevalence of early menarche of 10.3% and late menarche of 8.8%.

From the research that has been done, it is known that as many as 90 (94.7%) young women experience menarche at a large age of 12 years while 5 (5.3%) other people experience menarche at a small age of 12 years. Early menarche before the age of 12 years has been linked to several health complications including gynecological diseases. Young women with menarche less than 12 years have a 23% higher risk of experiencing primary dysmenorrhea compared to girls with menarche age 12-14 years, this is due to prolonged exposure to prostaglandins, causing cramps and pain in the abdomen during menstruation.

The relationship of early menarche to the hormonal pattern of the menstrual cycle is an important risk factor for primary dysmenorrhea, women with early menarche have higher serum

estradiol concentrations but lower concentrations of testosterone and dehydroepiandosterone. Increased hormone estradiol which has a role in regulating the onset of puberty in women (Larasati, 2016).

A family history of dysmenorrhea can also cause primary dysmenorrhea, based on the results of a study conducted on 48 teenage girls who have a family history of dysmenorrhea, 20 (21.1%) of them experienced mild pain, 16 (16.8%) people experience moderate pain and 12 (12.5%) others experience severe pain. Whereas in 47 young women who have no family history of dysmenorrhea, 10 (10.5%) of them did not experience pain, 30 (31.6%) people experienced mild pain, and only 7 (7.4%) people experienced severe pain. This is explained in the research report Charu et al in Larasati (2016) which states that 39.46% of women who experience dysmenorrhea have families with complaints of dysmenorrhea. So based on these studies it can be said that there is a strong correlation between the history of dysmenorrhea in families with the incidence of dysmenorrhea. The same thing was stated in the study of Mool Raj et al in Larasati (2016) where women with a history of family members with complaints of dysmenorrhea had three times greater chance of experiencing dysmenorrhea than women without a family history of dysmenorrhea (Larasati, 2016).

Meanwhile, according to Ehrenthal, Hoffman, and Hillard (2006) the occurrence of severe primary dysmenorrhea is related to family history and genetics (Ehrenthal, Hoffman, Hillard, 2006).

**Hemoglobin Level**

Based on the results of research conducted on 95 young women in Islamic boarding schools in Sumani, Solok Regency in 2019 showed that 57 (60%) adolescent girls had hemoglobin levels12 gr / dL while 38 (40%) adolescents girls have hemoglobin levels <12 gr / dL. Based on the results of Vitiasaridessy's research (2014) 40 (85.1%) respondents had hemoglobin levels <12gr% (anemia) and 7 (14.9%) respondents had hemoglobin levels> 12gr%.In general, adolescents in Islamic boarding schools are prone to anemia due to lack of nutritional intake obtained from food rations in boarding schools. Rations that can contain more carbohydrates, while the protein and iron content is not much. Coupled with the density of activities in Islamic boarding schools (Vitiasaridessy, 2014).

**Relationship of Hemoglobin Levels with Dysmenorrhea Pain Scale in Female Adolescent Islamic Boarding School in Sumani, Solok Regency**

Based on the results of the study it can be seen that the hemoglobin level ≥12 gr / dL obtained the results of 8 respondents (14.0%) did not experience dysmenorrhea, 41 respondents (71.9%) experienced mild dysmenorrhea, 2 respondents (3.5%) experienced moderate dysmenorrhea and 6 respondents (10.5%) experienced severe dysmenorrhea.

Whereas with hemoglobin level <12 gr / dL, 2 respondents (5.3%) experienced mild pain, 9 respondents (23.7%) experienced moderate pain, 14 respondents (36.8%) experienced moderate pain and 19 respondents ( 34.2%) experienced severe pain. Chi-square test results obtained pvalue 0.00 (≤0.05), this shows that there is a relationship between hemoglobin levels with dysmenorrhea pain scale.

The results of this study are in line with previous studies conducted by Vitiasaridessy (2014) with the title Hemoglobin Levels with Adolescent Dysmenorrhea Events, that of 38 (80.9%) adolescents who experience dysmenorrhea 37 (78.7%) have Hb levels <12 gr / dL and tested using a statistical test with the value of Q = 0.00, this shows the relationship between Hb levels with dysmenorrhea in young women (Vitiasaridessy, 2014).

The results of this study are also in line with research conducted by Mawaddah (2018) with the title Relationship Between Hemoglobin Levels and the Occurrence of Dysmenorrhea in Adolescents. From 90 respondents, 48 respondents (85.7%) experienced moderate dysmenorrhoea with hemoglobin level ≥ 12 gr / dl and 8 respondents (14.3%) experienced severe anemia with hemoglobin level ≥ 12 gr / dl. While 34 respondents (100%) experienced severe dysmenorrhoea with hemoglobin levels <12 gr / dl. Chi-square test results obtained a p value of 0.00 (≤0.05), this shows that there is a relationship between hemoglobin levels and the incidence of dysmenorrhoea. Severe dysmenorrhoea is 5.25 times higher for experiencing Hb values ≤ 12 gr / dL (Mawaddah, 2018).

Dysmenorrhoea can occur due to increased levels of prostaglandins in the blood resulting in stimulation and decreased blood flow to the myometrium which causes an increase in contractions and dysrhythmias in the uterus and a decrease in blood flow to the uterus and hypoxia. Decreased oxygen levels occur because hemoglobin levels are reduced and decreased blood flow, resulting in a decrease in the pain threshold in the afferent nerve pelvic nerve. That is, the lower hemoglobin levels in adolescent girls the more easily experience dysmenorrhoea (Vitiasaridessy, 2014).

This was also explained by Bodur, et al (2017) in Medicine Science International Medical Journal with the title Considerations on pathophysiology of primary dysmenorrhea under the light of alterations in complete blood count parameters that prostaglandin levels in women with dysmenorrhea were doubled in women compare who did not experience dysmenorrhea. After a decrease in progesterone levels, omega-6 fatty acids, especially the arachidonic acid, are released and a cascade of prostaglandins and leukotrienes begins in the uterus. As a result, cramps and systemic symptoms can occur such as nausea, vomiting, bloating and headaches. In particular, this increased prostaglandin F2a can cause vasoconstriction and myometrial contractions, causing ischemia and menstrual pain (Burok et al, 2017).

In the research results also found respondents with normal hemoglobin levels but still experience mild, moderate, to severe dysmenorrhea, this can occur because of the presence of many factors that cause dysmenorrhea in addition to hemoglobin levels. Other factors include the factors of life and endocrine.

Psychiatric factors that can occur are adolescents with emotional levels that are not stable. Endocrine factors are related to tone and contractility of uterine muscles, because endometrium in the secretion phase produces prostaglandin F2 which causes smooth muscle contractions. If excessive amounts of prostaglandins are released into the bloodstream, it can cause anemia. Research in recent years shows that increased levels of prostaglandins play an important role in the etiology of primary dysmenorrhea.

In addition to psychiatric and endocrine factors, there are pain factors that affect the level of dysmenorrhea. Pain is a mixture of physical, emotional, and behavioral reactions whose nature and level vary depending on a person's pain threshold, so it can be concluded that there are still many factors causing dysmenorrhea in addition to hemoglobin levels (Ropitasari, 2015).

## IV. CONCLUSION

Based on the results of research that has been done, the following conclusions can be drawn:

1. More than half of adolescent girls experience primary dysmenorrhea with mild pain as the most category.
2. More than half of adolescent girls have hemoglobin levels ≥ 12 gr / dL.
3. There is a significant relationship between hemoglobin levels and the scale of dysmenorrhea pain in adolescent girls in Islamic boarding schools in Sumani, Solok Regency.

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# DETERMINANTS OF EXCLUSIVE BREASTFEEDING IN AIR DINGIN PRIMARY HEALTH CENTER IN 2018

**Hardisman[1] Lusiana El Sinta Bustami [2]Lailani Najrani [3]**

[1] *Departemen of Medicine Community Science, Faculty of Medicine, Andalas University, Padang, Indonesia*
[2]*Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[3]*Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
hardisman@med.unand.ac.id[1]

**Abstract**

Exclusive breastfeeding is providing food for infant only breastmilk without any liquid or other solid substances including water, except vitamins, minerals, and medicine. The World Health Organization (WHO) recommends exclusive breastfeeding for up to six months. In 2016 Exclusive Breastfeeding coverage in Indonesia was still below the national target (80%). The purpose of this study was to determine the factors related to exclusive breastfeeding in the working area of the Air Dingin Primary Health Center in 2018. A cross-sectional study was conducted in the working area Air Dingin primary health center from February to September 2018. The sample of this study was mothers who had children aged 6-12 months as many as 115 people who met the inclusion criteria. Mothers as respondents were interviewed directly using a questionnaire. The analysis was carried out by chi-square statistic test and multivariate analysis used multiple logistic regressions. Results of this study obtained 63.5%, not exclusive breastfeeding. Factors that influence are good knowledge (81.7%), positive attitude (89.6%), high education (74.8%), no interest in the promotion of formula milk (69.6%), supporting health workers (91,3%). There is a relationship among knowledge (p = 0.002), level of education (p = 0.007), attention to formula milk (p = 0.008) of exclusive breastfeeding. In contrast, there was no relationship between attitudes (p = 0.053) and support from health workers (p = 0.322) with exclusive breastfeeding. Multivariate analysis obtained the dominant variable is known.

**Keywords** : Exclusive breastfeeding, knowledge, attitude, level of education, interest in the promotion of formula milk, support of health workers

## INTRODUCTION

Mother's milkis a liquid from the secretion of maternal breast glands (PPRI, 2012). Breast milk is the most perfect source of nutrition for babies because breast milk contains all the nutrients needed by babies during the first six months of life (WHO, 2018). Provision of proper nutrition for babies can increase the chances of the baby surviving, optimizing the growth and development of the baby in the critical period, namely until the baby is two years old (UNICEF, 2018).

The World Health Organization (WHO) recommends that breast milk is given exclusively for six months to achieve optimal growth, development, and health. Exclusive breastfeeding is breastfeeding without any liquid or other solids including water, except vitamins, minerals, and medicines (WHO, 2018). Ideally, the baby should be initiated to breastfeed within one hour of birth, exclusively breastfed during the first six months of life and continue to be breastfed until the age of two (UNICEF, 2018).

Globally, only 45% of newborns initiate early breastfeeding, and two out of five babies aged less than six months are exclusively breastfed. Data from the United Nations Children's Fund (UNICEF), the percentage of infants aged six months to get exclusive breastfeeding in 2015 in the world about 43%. in East Asia and the Pacific in 2015 the percentage of exclusive breastfeeding was 30% and the highest percentage in the South Asian region reached 55% (UNICEF, 2018). WHO targets in 2025 the coverage of exclusive breastfeeding in the first six months at least 50% (WHO, 2014).

Indonesia is one of the countries in the East Asia and Pacific region which still has the coverage of Exclusive ASI below the target. In 2016 Exclusive ASI coverage in Indonesia was 29.5% with the lowest coverage in North Sumatra Province (12.4%) and the highest coverage in DI Yogyakarta Province (55.4%) (Kemenkes RI, 2017).

Exclusive breastfeeding The first six months of life are generally associated with a reduction in infant morbidity and mortality, especially in developing countries. The risk of morbidity is reduced by about 70% when babies are exclusively breastfed (Alamirew, 2017). According to Lancet's Series on Child Survival,an increase in the prevalence of breastfeeding optimally can reduce 13% of all infant deaths in developing countries (Mogre, 2016).

Babies who get exclusive breastfeeding can increase the immune system and can protect babies from chronic conditions such as obesity and diabetes, while babies who are not exclusively breastfed can risk dying from diarrhea or pneumonia (UNICEF, 2018).

West Sumatra is one of the Provinces in Indonesia with the position of Exclusive ASI coverage in 2016 ranked 10$^{th}$ with coverage of 67.9% and increasing in 2017, which is 68.3%, although this increase in coverage is still low due to under national target is 80% (kemenkes RI, 2017, Dinkes Provinsi Sumatera Barat , 2017; 2018). District / City with the highest exclusive breastfeeding coverage in 2017 in West Sumatra, Solok City 89.8% and the lowest in Padang Panjang City, which is 56.6% (Dinkes Provinsi Sumatera Barat, 2018).

The city of Padang as one of the barometers in West Sumatra has Exclusive ASI coverage which still has not reached its target of 72.22%. Achievements in the city of Padang vary, some have reached the target and there are also those below the target. Of the several Puskesmas working areas in the city of Padang, the highest coverage of exclusive breastfeeding was Lubuk Kilangan health center, namely 96.30%, and the lowest coverage was the working area of Air Dingin health center, which was 33.85% (Dinkes Kota Padang, 2017).

The achievement of exclusive breastfeeding in the working areas of the Cold Water Health Center for the past three years has been very low and has decreased, namely in 2014 amounting to 52.57%, 2015 at 53.75% and in 2016 decreased to 33.85% (Dinkes Kota Padang, 2015; 2016; 2017). The low coverage of exclusive breastfeeding in the working area of the Air Dingin health center shows that there are still problems in exclusive breastfeeding.

## METHODS

This research is a quantitative study with a design *cross-sectional*. The samples of this study were mothers who had babies aged 6-12 months and all members of the population who met the inclusion criteria and did not meet the exclusion criteria were taken as samples. The data collection involved 115 respondents in the working area of the Air Dingin Health Center and interviewed using a questionnaire. Data were analyzed by univariate, bivariate using *Chi-Square* (*p-value* $\leq$0.05) and multivariate analysis using logistic regression.

## RESULTS

### Univariate Analysis

**Table 1.Frequency Distribution of Characteristics of Respondents Determinants of Exclusive Breastfeeding in Air Dingin Primary Health Center in 2018**

| Characteristics of Respondents | f (n = 115) | % |
|---|---|---|
| **Age** | | |
| <20 years | 2 | 1.7 |
| 20-35 years | 90 | 78.3 |
| > 35 years | 23 | 20 |
| **Employment ofMothers** | | |
| Working | 20 | 17.4 |
| Not Working | 95 | 82.6 |
| **Place of Delivery** | | |
| Non-Health Facilities | 0 | 0 |
| Health Facilities | 115 | 100 |

| | | |
|---|---|---|
| **Types ofDelivery** | | |
| Operational | 46 | 40 |
| Normal | 69 | 60 |

In table 1 it can be seen that the characteristics of respondents based on age, most respondents aged 20 -35 years (78.3%), based on the respondent's work it was found that many respondents were unemployed (82.6%), based on the place of delivery of all respondents giving birth in health facilities (100%), and based on the type of delivery the respondents had the most maternity normally (60%).

**Table 2. Frequency Distribution of Exclusive Breastfeeding in Air Dingin Primary Health Center in 2018**

| Exclusive Breastfeeding | f | % |
|---|---|---|
| No Exclusive Breastfeeding | 73 | 63.5 |
| Exclusive Breastfeeding | 42 | 36.5 |
| **Total** | **115** | **100** |

The results of a descriptive analysis of exclusive breastfeeding in the working area of Air Dingin Health Center indicate that more than half of mothers do not exclusively breastfeed their babies (63.5%).

**Table 3. Distribution of Frequency of Factors Affecting Exclusive Breastfeeding**

| Variable | f (n = 115) | % |
|---|---|---|
| **Knowledge** | | |
| Poor | 21 | 18.3 |
| Good | 94 | 81.7 |
| **Attitudes** | | |
| Negative | 12 | 10.4 |
| Positive | 103 | 89.6 |
| **Education Level** | | |
| Basic | 29 | 25, 2 |
| High | 86 | 74.8 |
| **Interest PromotionMilk Formula** | | |
| Interested | 35 | 30.4 |
| No interest | 80 | 69.6 |
| **Health Worker Support** | | |
| Less Support | 10 | 8.7 |
| Supports | 105 | 91.3 |

Based on table 3 shows that most mothers who have babies> 6-12 month have good knowledge (81.7%). More than half of the respondents had a positive attitude (89.6%). The highest education level of respondents came from higher education or those who had completed high school education, diploma/bachelor, which was 74.8%. The majority of mothers were not interested (69.6%) for the promotion that mothers got. More than half of the respondents (91.3%) received support from health workers.

**Bivariate Analysis**

**Table 4. Relationship of Factors Affecting Exclusive Breastfeeding in Air Dingin Primary Health Center in 2018**

| Factor that influence | | Giving of ASI | | | | *p-value* |
|---|---|---|---|---|---|---|
| | | No Exclusive Breastfeeding | | Exclusive BreastFeeding | | |
| | | **f** | **%** | **f** | **%** | |
| Knowledge | Poor | 20 | 95,2 | 1 | 4,8 | 0,002 |
| | Good | 53 | 59,7 | 41 | 34,3 | |
| Total | | 73 | 63,5 | 42 | 36,5 | |
| Attitudes | Negative | 11 | 91,7 | 1 | 8,3 | 0,053 |
| | Positive | 62 | 60,2 | 41 | 39,8 | |
| Total | | 73 | 63,5 | 42 | 36,5 | |
| Education Level | Basic | 25 | 86,2 | 4 | 13,8 | 0,007 |
| | High | 48 | 55,8 | 38 | 44,2 | |
| Total | | 73 | 63,5 | 42 | 36,5 | |
| Interest Promotion Milk Formula | Interested | 29 | 82,9 | 6 | 17,1 | 0,008 |
| | Not interested | 44 | 55 | 36 | 45 | |
| Total | | 73 | 63,5 | 42 | 36,5 | |
| Health Worker Support | Less Support | 8 | 80 | 2 | 20 | 0,322 |
| | Supports | 65 | 61,9 | 40 | 38,1 | |
| Total | | 73 | 63,5 | 42 | 36,5 | |

Percentage of respondents who do not have more exclusive breastfeeding at mothers with poor knowledge (95.2%) compared to mothers who were well-informed (59.7%). The results of the statistical test *chi-square* get *p-value* =0.002, meaning that there is a significant relationship between knowledge and exclusive breastfeeding.

Respondents who did not have exclusive breastfeeding were more mothers with a negative attitude (91.7%) than mothers who had a positive attitude (60.2%). Mothers who have a negative attitude tend not to give exclusive breastfeeding, but the results of the statistical test *Chi-square* get a *p-value* =0.053, meaning that there is no significant relationship between attitudes and exclusive breastfeeding.

The percentage of respondents who did not have exclusive breastfeeding was higher for mothers with basic education (86.2%) compared to mothers with a higher education level (55.8%). The results of the statistical test *Chi-square* get a *p-value* =0.007, meaning that there is a significant relationship between the level of education with exclusive breastfeeding.

Respondents who did not have exclusive breastfeeding were more likely to be mothers who were interested in promoting formula milk (82.9%) than mothers who were not interested (55%). The results of the statistical test *Chi-square* get a *p-value* =0.008, meaning that there is a significant relationship between the interest in the promotion of formula milk with exclusive breastfeeding.

Respondents who did not have more exclusive breastfeeding were mothers who did not get the support of health workers (80%) compared to mothers who received support (61.9%) The results of the statistic test *Chi-square* obtained *value* =0.322, meaning there was no significant relationship between support of health workers with exclusive breastfeeding.

**Table 5. Final Model of Multivariate Analysis and Variables that Most Affect Exclusive Giving of Exclusive Breastfeeding**

| Variable | POR | (95% CI) | *P value* | $R^2$ |
|---|---|---|---|---|
| Knowledge | 8.55 | (1,025-71,448) | 0.047 | 0,305 |
| Level Education | 4,13 | (1,235-13,857) | 0,021 | |
| Interest Promotion Milk Formula | 3.45 | (1,211-9,863) | 0.020 | |
| Attitude | 4.48 | (0.477-42.153) | 0.190 | |

Based on the results of multivariate analysis and final modeling, the most dominant factors affecting exclusive breastfeeding are those that have the highest POR value, namely knowledge with POR value amounting to 8.55 and *p-value* =0.047. This means that respondents who have poor knowledge risk 8.55 times not to give exclusive breastfeeding to their babies compared to respondents who have good knowledge.

The statistical results also get *R Square* of 30.5% (0.305). This means that the variables of knowledge, level of education, interest in the promotion of formula milk and attitudes to contribute to exclusive breastfeeding of 30.5% and 69.5% are influenced by other factors not analyzed.

## DISCUSSION

### Characteristics of Respondents

Respondents in this study were 115 mothers who had babies aged> 6-12 months in the Work Area of Air Dingin Health Center. Description of respondents according to age shows the highest distribution at the age of 20-35 years which is as much as 78.3%. The age that is safe in healthy reproduction for breastfeeding is 20-35 years. At the age of fewer than 20 years it is considered still immature physically, mentally, psychologically, physically and socially in breastfeeding. Whereas the age above 35 years is considered dangerous because physical, emotional and hormone production has been reduced, resulting in a decreased lactation process (Suffian, 2017).

The delivery place in this study was divided into two groups, namely in health facilities and non-health facilities. The results showed that all respondents (100%) delivered at health facilities. Mothers who choose to give birth at health facilities are more supported in exclusive breastfeeding because of direct supervision by health workers (Mamonto, 2015.)

Types of labor in this study were divided into two groups: surgical delivery *(section cesarean)* and normal delivery (vaginal). The results showed that more than half of the respondents (60%) gave birth normally. Normal maternal mothers can immediately breastfeed their babies if they are treated in combination (Suffian, 2017).

The types of work of the respondents in this study were divided into two groups: work and not work. The results showed that most respondents (82.6%) did not work or housewives. A working mother will have additional income for her family who can finally fulfill her family's needs (Untari, 2017)

### Exclusive breastfeeding

Based on the research conducted, it was found that out of 115 respondents interviewed, more than half of mothers (63.5%) did not breastfeed their babies exclusively. The results of this study are in line with the research conducted by Arifiati (2017) in Wanasari Village, Cilegon City, which states that most mothers do not give exclusive breastfeeding (76.4%).

This result is different from the research conducted by Fahriani (2014) which found more than half of mothers who gave exclusive breastfeeding (75%). This is because Fahriani's research was carried out in hospitals that had implemented the *baby-friendly hospital initiative* (BFHI) program or baby hospital that was recommended by WHO and UNICEF.

The results of this study obtained 63.5% of mothers who did not give exclusive breastfeeding because the mother had provided additional food and fluids before the age of six months. The results

of the analysis of the questionnaire answers obtained additional food and fluids that were given by many mothers namely water (42.6%), formula milk (31.3%) and bananas (21.7%).

The results of interviews of researchers with respondents found that the reason mothers provide additional food and fluids is that of the production of breast milk that does not come out at the beginning of birth, mothers who feel little milk production, mothers who give birth by cesarean.

Reasons for mothers who failed to provide exclusive breastfeeding in this study are in line with several studies and theories. According to UNICEF (2012), many mothers worry that babies will be hungry or dehydrated before maternal colostrum production is sufficient. Meanwhile, newborns have stored enough body fluids to meet their limited needs at the beginning of birth. No additional fluid or food is needed because it will cause diarrhea in infants and maternal lactation will be disrupted because the baby will lose the instinct to breastfeed.

Psychological factors include barriers to exclusive breastfeeding. Mother's perception of insufficient breast milk is caused by psychological. Mothers who feel their ASI production is less likely to have low self-confidence in breastfeeding (Fahriani at al., 2014).

Labor with *cesarean*one of the factors that causes failure of breastfeeding, especially initiation of early breastfeeding (UNICEF, 2012). According to Wulandari and Dewanti (2014) based on a systematic review involving 33 countries, the results of the prevalence of early breastfeeding were lower in mothers *post section cesarean* compared to those who have a vaginal delivery.

**Knowledge**

Based on the research that has been done, the results show that out of 115 respondents studied, the percentage of respondents who have good knowledge is 81.7% and respondents who have poor knowledge are 18.3%. That is, most respondents have good knowledge about Exclusive Breastfeeding.

In this study, it was found that mothers who did not have exclusive breastfeeding were more mothers with poor knowledge (95.2%) than mothers who had good knowledge (56.4%). The statistical test results obtained *p-value*= 0.002, which means that there is a significant relationship between knowledge with exclusive breastfeeding in the work area of Air Dingin Health Center in 2018.

The results of this study are in line with research conducted by Wowor (2013) that most respondents have knowledge with a good category is 86.8% while respondents with sufficient knowledge are 13.2%. This research is also in line with the research conducted by Astuti (2013) in the Serpong Community Health Center working area where there is a relationship between knowledge of mothers and exclusive breastfeeding with *p-value*= 0,000.

However, the results of this study are different from Nasution's (2016) research in the Bungus Health Center Working Area in 2014 which received more than half of respondents having a low level of knowledge (65.8%) while respondents with a high level of knowledge were only 34.2%. This research is also not in line with the research conducted by Sartono and Utaminingrum (2012) in Semarang City, who gained knowledge of mothers did not have a relationship with the practice of exclusive breastfeeding and obtained *p-value* =0.997.

According to Sartono and Utaminingrum's study of 14.5% of mothers who exclusively breastfed 55.5% of them had insufficient knowledge, but succeeded in breastfeeding because they followed breastfeeding recommendations from childbirth assistants who fostered a personal intention to breastfeed their babies.

Knowledge is a very important domain for the formation of one's behavior (Notoatmodjo, 2012). Sufficient knowledge possessed by a mother regarding Exclusive Breastfeeding can underlie the actions of Exclusive Breastfeeding, where mothers with good knowledge will better understand the importance of exclusive breastfeeding and benefits, then the mother will apply and realize the exclusive provision of exclusive breastfeeding (Susmaneli, 2012).

In theory, someone will adopt a new behavior following the stages or processes of KAP (*Knowledge-Attitude-Practice*), but in everyday practice the opposite is true, someone with positive knowledge does not necessarily behave positively (Notoatmodjo, 2012).

Based on the frequency distribution of maternal knowledge in this study, the majority of mothers answered questions correctly regarding Exclusive Breastfeeding but were not in line with the actions of exclusive breastfeeding. Interview with the mother found that some mothers gave additional fluids such as water (42.6%) to their babies on the grounds that breast milk had not come out at the beginning of the birth and after breast milk came out the mother would give exclusive breastfeeding to her baby until the age of six months.

**Attitudes**

The results of this study indicate that most mothers have a positive attitude that is 89.6% while mothers who have a negative attitude are 10.4%. The results showed that the proportion of mothers who did not have exclusive breastfeeding had more negative attitudes (91.7%) than mothers who had a positive attitude of 60.2%. Mothers who have negative attitudes tend not to give exclusive breastfeeding, but the results of statistical tests get *p-value*= 0.053, which means there is no significant relationship between attitudinal variables towards exclusive breastfeeding in the work area of Air Dingin Health Center in 2018.

These results are in line with research conducted by Yanuarini (2014) in the working area of the Pranggang Health Center in Kediri Regency, it was found that most respondents had very good attitudes in exclusive breastfeeding, namely (72.92%). This result is also the same as the research conducted by Agow *et al* (2017) in the work area of the Small Motoboi Community Health Center in Mobagu City, getting p = 0.148> 0.05, which means that the mother's attitude is not related to exclusive breastfeeding.

However, the results of this study are different from the results of a study conducted by Widiyanto (2012) in Kramat Village, Grobogan Regency, which found that mothers 'attitudes were less supportive of 53.3% Exclusive Breastfeeding while the mothers' attitude was only 46.7%. It is also different from the research of Setyorini *et al* (2017) in the working area of the Puskesmas Pengandan Kota Semarang that gets *p value*= 0,000, which means that there is a significant relationship between attitudes and exclusive breastfeeding.

Attitude is a reaction or response that is still closed from someone to a stimulus or object. Attitude is a tendency that originates from within a person to act with a certain pattern. Attitudes, not the same as behavior and behavior do not always reflect attitudes (Notoatmodjo, 2012).

A positive attitude about ASI will affect the practice of exclusive breastfeeding. Behavior is the result of a careful and reasonable decision-making process taking into account the advantages and disadvantages of action (Septiani, 2017).

The results of this study indicate that most respondents had a positive attitude towards exclusive breastfeeding, but the rate of exclusive breastfeeding was still low. This is in line with the existing theory, even though the mother's positive attitude towards exclusive breastfeeding has not been determined in her daily practice of giving exclusive breastfeeding.

Based on the respondents' answers to the questionnaire, it was seen that most mothers did not agree to milk the milk as an alternative when the mother worked or traveled. This is because most mothers (82.6%) do not work or housewives so mothers are more often with their babies and have more time to care for their babies and can breastfeed their babies directly. Mothers who do not work or housewives do not immediately give exclusive breastfeeding, because the interviews revealed that mothers who did not breastfeed exclusively were due to breast milk that did not come out at the time of birth.

**Education Level**

The results of this study indicate that the majority of mothers have a higher education level of 74.8% while 25.2% for mothers from primary education. In this study, it was found that mothers who did not breastfeed their babies exclusively were more likely to be mothers with a primary education level of 86.2% compared to mothers of higher education at 55.8%. The results of statistical tests carried out obtained *p value*= 0.007, which means the education level has a significant relationship with exclusive breastfeeding in the work area of Air Dingin Health Center in 2018.

The results of this study are in line with research conducted by Arifiati (2017) in Warnasari Urban Village, Cilegon. most of the respondents had higher education which was 74.5%. This research is also in line with research conducted by Atabik (2014) in Pamotan Village, Rembang Regency, which found that there was a significant relationship between exclusive breastfeeding and education level with a *p value*= 0.001.

However, the results of this study are not in line with Untari's (2017) research in the working area of the Puskesmas Minggir, Sleman, where most of the respondents were low educated (elementary and junior high school), which was 87.5%. This result is different from the research conducted by Fahriani et al. (2014) found that maternal education levels were not related to exclusive breastfeeding.

This is because Fahriani's research found that mothers with secondary education were not inferior in terms of finding information about ASI through internet sites, social networking communities. So that through the community mothers can share information about breast milk and problems or difficulties during breastfeeding.

Education is a basic human need that is needed for self-development. The higher the level of education, the easier it is to receive and develop knowledge. Education will affect all aspects of human life both thoughts, feelings, and attitudes (Astuti, 2013).

According to Jatmika (2014), the level of education is very influential on knowledge, especially in the formation of behavior, the higher the level of education of a person, the higher the level of one's awareness of a matter and the more mature consideration of someone to make a decision.

The results of this study found that mothers who breastfed their babies exclusively had a high level of education (44.2%). Because mothers with higher education are more open in receiving information and knowledge. For mothers with basic education but exclusively breastfeeding (13.8%) it is because mothers get information about Exclusive Breastfeeding from health workers and families so that the mother's education level is not a barrier for mothers to give exclusive breastfeeding.

**Interest in Milk Formula Promotion**

The results of this study found that most mothers (69.6%) were not interested in the promotion of formula milk received while mothers who were interested in promoting formula milk were 30.4%. These results found that mothers who were not exclusively breastfed were mostly interested in the promotion of formula milk which was 82.9% while mothers who were not interested in promoting formula milk were 55%. The statistical test results obtained *p value*= 0.008, meaning that there was a significant relationship between the interest in the promotion of formula milk for exclusive breastfeeding in the working area of Air Dingin Health Center in 2018.

This result is in line with research conducted by Rahmawati *et al* (2011) at Posyandu Kemudo Prambanan village Klaten found that the majority of respondents were not interested in formula milk advertising, which was 60%. This research is also in line with Ihsani (2011) research in Solok City, West Sumatra, which received *p value*= 0.002, which means that there is a significant relationship between the promotion of formula milk at the place of delivery with exclusive breastfeeding.

But this study is not in line with the research conducted by Vonitania (2017) in the Andalas Community Health Center working area getting more than half of the respondents interested in the promotion of formula milk which is 57.8%.

Based on the Government Regulation of the Republic of Indonesia (PPRI) No. 33 of 2012 pasal 19, there is a prohibition to promote infant formula milk or activities that can prevent exclusive breastfeeding. Advertising that is published in mass media, both print and electronic, and outdoor media.

The results of interviews of researchers with respondents, there are some respondents who still get promotion of formula milk via telephone, but respondents said they were not interested in using formula milk. This is because the mother has good knowledge of exclusive breastfeeding so she is not interested in promoting formula milk.

This result also found that mothers with exclusive breastfeeding were interested in promoting formula milk as much as 17.1%, but decided not to give formula milk because babies who did not want to be given extra milk other than breast milk and also because mothers who had good knowledge about exclusive breastfeeding. Whereas mothers who did not exclusively breastfeed and were not interested in promoting formula milk were as much as 55%. This is due to other factors such as mother's milk that does not come out at the time of birth, mother's milk is not enough so that the mother gives formula milk early.

**Health Worker Support**

The results of this study indicate that the majority of mothers received support from health workers, namely 91.3% while mothers who did not get support were 8.7%. This result found that most mothers who were not exclusively breastfed had less support from health care, namely 80%, while health workers supported 61.9%. The results of statistical tests get *p value*= 0.322, meaning that there is no relationship between the support of health workers with exclusive breastfeeding in the working area of Air Dingin Health Center in 2018.

These results are in line with research conducted by Deafira (2017) in Manado health facilities that 63, 9% of respondents received support from health workers. This research is also in line with Usman's research (2016) in the working area of Manado City Puskesmas Puskesmas getting a value of p = 0.057 which indicates that there is no relationship between the support of health workers and exclusive breastfeeding.

In contrast to the research conducted by Arifiati (2017) in the Warnasari village of Cilegon City found that most respondents did not get support from health workers. This result is also not in line with the research conducted by Sadiman (2014) in Central Lampung District who obtained the statistical test results *p value*= 0,000 meaning that there was a relationship between the support of health workers with exclusive breastfeeding.

Health workers are someone who is valued and respected in the eyes of their clients. Its role in the health sector is very much needed (Deafira, 2017). Support of health personnel in exclusive breastfeeding is not only in providing information but also provides counseling if mothers experience problems related to breastfeeding (Agow et al, 2017).

Based on respondents' answers to the questionnaire it was found that most mothers did not get support in the form of emotional and appreciation from health workers. This is due to mothers who have no contact with health workers after six months so there is no *feedback* from health workers to mothers regarding Exclusive Breastfeeding. In addition, there are also mothers who rarely go to health facilities when problems occur while breastfeeding and prefer to decide for themselves or get advice from the family in overcoming the problem of breastfeeding.

**Multivariate Analysis**

Multivariate analysis using multiple logistic regression test with entering method. Multivariate results obtained that the knowledge variable is the most dominant variable that influences exclusive breastfeeding after being controlled by the level of education, interest in the promotion of formula milk and attitudes.

Based on the multivariate results, it was found that the variable with the exponent value of betha (exp B) was the largest of the final modeling is knowledge with the value of POR = 8.55 and *p-value* =0.47. This means that respondents who have poor knowledge risk 8.55 times for not giving exclusive breastfeeding compared to respondents who have good knowledge after being controlled by education level, interest in the promotion of formula milk and attitudes.

This is in line with the research conducted by Septiani (2017) in Bandar Lampung that knowledge is the dominant factor in exclusive breastfeeding with an OR = 13 value, meaning that mothers who have good knowledge have 13 times the opportunity to give exclusive breastfeeding compared to mothers who have less knowledge.

This result is also the same as the results of Eugenie (2015) study in Cengkareng Sub-district Health Center found that knowledge is the dominant factor in exclusive breastfeeding with OR =

0.518, which means that knowledgeable mothers tend to give exclusive breastfeeding 5.2 times compared to mothers with low knowledge.

Knowledge is a domain that is very important for one's actions. Behavior-based on knowledge will be better than behavior that is not based on knowledge (Astuti, 2013).

According to Notoatmodjo (2007), before a person adopts a behavior, he must first know what the meaning or benefits of the behavior are for himself and his family. After knowing about the stimulus or object of health someone will make an assessment or opinion of what he knows. The next process is expected that he will implement or practice what he knows or what he thinks is good.

A person's knowledge is also influenced by internal and external factors. One external factor is information or mass media. Information can be found in everyday life obtained from data and observations of the surrounding environment. As well as information obtained from both formal and non-formal education (Yanuarini, 2014).

In this study, the inconsistency between the percentage of knowledge and the act of giving exclusive breastfeeding can be caused by a lack of understanding of mothers regarding exclusive breastfeeding. Mothers who have heard from health workers, but there are those who forget and some who do not understand. Some know but only know and don't understand it.

According to Astuti (2013), mother's knowledge that is still lacking can cause the failure of Exclusive breastfeeding, even though knowledge is the main basis for human beings to do something. The existence of good knowledge and good judgment will motivate someone to take this action.

Mothers who have adequate knowledge of exclusive breastfeeding will pay more attention to the importance of exclusive breastfeeding for babies and themselves. So, mothers who have good knowledge will tend to try more to give exclusive ASI to their babies (Arifiati, 2017).

Therefore, in giving exclusive breastfeeding after mothers know what exclusive breastfeeding is, composition, benefits for babies and mothers are expected that mothers can be better at giving exclusive breastfeeding and practicing it in daily life (Yanuarini, 2014).

## CONCLUSION

1. More than half of respondents aged 20-35 years, all respondents gave birth in health facilities, more than half of respondents gave birth normally, more than half of respondents did not work.
2. More than half of the respondents did not give exclusive breastfeeding.
3. More than half of the respondents have good knowledge, positive attitude, high level of education, are not interested in promoting formula milk and have the support of health workers.
4. There is a meaningful relationship between knowledge, level of education, interest in the promotion of formula milk with exclusive breastfeeding. There is no relationship between attitudes and support of health workers with exclusive breastfeeding.
5. Knowledge is the most dominant variable influencing exclusive breastfeeding in the working area of Air Dingin Health Center in 2018.

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# RELATIONSHIP OF THE INCIDENCE OF MYOPIA IN ADOLESCENTS WITH FAMILY HISTORY

**Aisyah Elliyanti[1]Salmafairuz Fernando[2], Kemala Sayuti[3]**

[1]*Ophthalmology Department, Faculty of Medicine, RSUP DR. M Djamil, Padang, Indonesia*
[2]*Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[3]*Medical Physics Department, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
aelliyanti@med.unand.ac.id[1]

**Abstract**

The shadow of the far away object will be focused in front of the retinais known as myopia. Genetic and environment are the risk factors of myopia. The aim of this study is to analyzed relatioship of the myopia incidence in adolescents with parents myopia history.

This study was a case-control study design. Samples were selected using a random sampling technic. The study was carried on at Junior High School 1 Padang Panjang from March to July 2018. Seventy students were included in this study, consist of 35 students with myopia and 35 students with emmetropia. The samples were grouped into two groups; myopia group which used the glasses, and control group with normal vision. The parent histories were taken by using the questionnaire. Chi square test was carried out to analysed the data.

In this study, 20% of myopia groups having parents histopy of myopia, and 14% of control group having parents history of myopia, with *p*value = 0.314.

In this study myopia casehave not assosiation with genetic family histories, other factors can be came influences develoment of myopia in adolescents. Further studies are need to explore other factor that influence for myopia incidence in adolescent that can be modified to reduced the incidence.

**Keywords** : Genetic, reading position, myopia

## INTRODUCTION

Myopia is a refractive error in which the eyes are not able to refract light at one focus to see objects clearly, while the near objects that are clearly visible but objects that are far away are blurred. It occurs when the eyeball is too long, so if the light comes from an infinite distance, the image will fall in front of retina. Myopia can also occur due to overly curved corneas or because the length of eyeballs (Schiefer et al., 2016).In 2010, WHO estimated that 27% of the world's population had myopia and 2.8% of the world's population had high myopia. The incidence is expected to continue to increase to 33% in 2020 and 52% in 2050 (WHO, 2015).

Myopia has several causes, such as eyeball lengthening, environmental influences, and genetics. Environmental influences such as near work activities can also increase the axial length of the eyeball due to excessive extraocular muscle work and ciliary muscle contraction. Lack of outdoor activity is also a main environmental influence. Wold Helath Organization (WHO) in 2015 reported, in East Asia due to the very intensive learning time of school, this condition accelerate the development and progression of myopia in children who have genetic factors. The Consortium for Refractive Errors and Myopia (CREAM) which is an international researchers team discovered twenty-four new genes that affect genetic myopia. Some of these genes are involved in nerve cell function, metabolism, and eye development (Verhoeven et al., 2013).A large number of chromosome localizations have been reported in high myopia, the *MYP1-MYP17* genes. These genes are related to the risk of a hereditary history of risk factors for myopia (Zhang et al., 2015).

Indonesia, a research shows that myopia more often begins to occur at the age of 13 (Fauziah et al., 2014). The age of the onset of myopia is included at the school age (5-15 years old) who are enrolled school or not(WHO, 2011). Parental history is an important factor associated with myopia that occurs in early adolescence (juvenile myopia). Research has been conducted on 366 students on 8th grade who participated in the Orinda Longitudinal Study of Myopia in Helsinki showed the risk factors for parental history are more influential than work activities. From 18.3% of students who had myopia, 32.9% of them with both parents who had myopia, 18.2% of them with one parent with myopia, and 6.3% of them who had parents without myopia histories (Mutti et al., 2002). A research reported the prevalnce of myopia in school children aged 6-15 years in East Jakarta was 32,3% and risk factors for parental history have a greater influence on the incidence of myopia than environmental factors (Nora et al., 2010).

A public junior high school I, in Padang Panjang city is a high rank accreditation of national standard school. The students of this school have high inovation in learning p and have long duration learning activity that force them to read a lot. The reading habit are one of the environmental risk factors that influence the incidence of myopia in this students. The aim of this study is to analyzed relatioship of the myopia incidence in adolescents with parents myopia history.

## SUBJECT AND METHOD

This study is case control study design. The study was conducted on March to July 2019 at junior high school I in Padang Panjang, West Sumatra, Indonesia.

### Population and Samples

The sample of this study was 70 students. Data obtain from questionnaire included general information and other data which required for this study. Visual acuity was measured by using snellen chart. Sampleswere divided into 2 groups; 35 myopia students ( myopia group) and 35 non-myopia students (control group). Myopia group was students who were using negative lenses. Students who had a 6/6 visual acuity and did not wear glasses were included in control group. Exclusion criterias were students who had different refractive abnormalities between the two eyes, had eye diseases such as cataracts, red eyesand had chronic diseases.Student glasses were examined whether negative or positive lenses. Visual acuity examination was performed using Snellen chart.
Parents history obtain from a questionnaire. Dichotomous data coded 0 for parents without myopia and 1 for parents with myopia.This study approved by Ethics Committee of Research Faculty of Medicine Universitas Andalas, No: 251/KEP/FK/2019.

### Data Analysis

Data were presented as frequency distribution of the studied variables. Chi square test was used to analyseda relationship between variables, with $p < 0.05$ was considered significantly.

## RESULTS

In this study, most of samples age was between 14-15 years old. Samples characteristic as shown in Table 1.

**Table 1.**Samples characteristic.

| Characteristics | | Myopia | | Control | |
|---|---|---|---|---|---|
| | | f | % | f | % |
| Age(years old) | 13-≤14 | 12 | 34,3 | 12 | 34,3 |

| | | | | | |
|---|---|---|---|---|---|
| | >14-≤15 | 21 | 60 | 21 | 60 |
| | >15-≤16 | 2 | 5,7 | 2 | 5,7 |
| Total | | 35 | 100 | 35 | 100 |
| Sex | Male | 11 | 31,4 | 11 | 31,4 |
| | Female | 24 | 68,6 | 24 | 68,6 |
| Total | | 35 | 100 | 35 | 100 |

The highest incidence of myopia is mild myopia which reached 80%, followed by moderate myopia, as shown in Table 2.

**Table 2**. Distribution of myopia degree of samples

| Degrees of myopia | f | % |
|---|---|---|
| Mild | 28 | 80 |
| Moderate | 7 | 20 |
| Severe | 0 | 0 |
| Total | 35 | 100 |

Only fourteen cases(40%)of myopia group hada parents history of myopia and from control group 28.5% as shown in in Table 3.

**Table 3**. Family history of myopia

| Family History | Myopia | | Control | |
|---|---|---|---|---|
| | f | % | f | % |
| Yes | 14 | 40 | 10 | 28.5 |
| No | 21 | 60 | 25 | 71.5 |
| Total | 35 | 100 | 35 | 100 |

It was found that, relationship between the incidence of myopia of the samples with the parents myopia history is not significant with p = 0.314.

**DISCUSSION**

Students with myopia are mainly aged between 14 to 15 years old. This was obtained because most of the respondents came from 8th grade. The results of this study were in line with research by Fan et al in Hong Kong in 2004 which showed that there was a relationship between myopia and age, more than half of children aged over 11 years (54,52%) become myopia (Fan et al., 2004). Based on the classification of myopia based on the age of onset according to the American Optometric Association (AOA), myopia in the samples is youth-onset myopia, that is myopia that occurs at age <20 years (Goss et al., 1997).

In this study, it was found that there were more female students from each group than male students. This is consistent with research conducted in China that girls are significantly more likely to suffer from myopia than boys, and the prevalence of myopia in girls is 6.23% higher than boys (Li et al., 2017). The difference in the development of myopia in boys and girls is due to girls spending more time reading and doing near work activities, and relatively less outdoor activities (Yip et al., 2012). Mild myopia is the higest cases, and no severe myopia was found. This study is in line with research by Fan et al in Hong Kong stating that the incidence of mild myopia in school-aged children is higher than that of moderate myopia and severe myopia (Fan et al., 2004). Mild myopia is myopia with lenses size up to minus 3 diopters, moderate myopia which is between minus 3 diopters to minus 6 diopters, and severe myopia, myopia with lenses size of more than 6 diopters.12 This is consistent with the literature which states that a person exposed to continuous risk factors may eventually have mild myopia (Frederick, 2002).

Usually, it was found that myopia patients had family history. In this study, 60% of myoplia samples do not have family history. It seems the samples have other dominant risk factors than genetic. It can be assumed such as lack of outdoor activities. In the other hand, A study reported that, there is a relationship between myopia in the parents with myopia in children. In a study conducted by the Singapore Cohort Study of Risk Factors for Myopia (SCORM) it was found that myopia in parents increases the axial length of the eyeball and the degree of myopia, where children with myopia in both parents have a longer axial eyeball length and higher degree of myopia compared to children who have myopia in one parent (Pan et al., 2012). In addition, research in Helsinki in grade 8 junior high school students showed that from 18.3% of students who had myopia, 32.9% had a history of both parents suffering from myopia, 18.2% had a history of one parent suffering from myopia, and 6.3% had no myopia in parents (Mutti et al., 2002). This study is in line with research conducted by Mutti which states that more myopia students have myopia parents compared to students who are not myopia, but the research by Mutti found that the value of $p = 0.001$ ($p < 0.05$) which shows that there is a significant relationship between myopia in parents with the incidence of myopia. Whereas in this study found there is no significant relationship between the myopia and family history. The result in this study consistent with Wulansari study (Wulansari et al., 2018).

Family history is one of the genetic risk factors that can increase the risk of myopia in children. Genes for the development of high myopia and myopia have been identified in studies of families and twins (Li and Zhang, 2017). There are studies that show that many mutations are reported to be related to the structure and metabolic constituents of the sclera extracellular matrix (Morgan et al., 2012). Sclera had structural changes including thinning, reduction in fibril diameter collagen, and fiber dysregulation which is the result of altered metabolism and ultimately leads to an increase in excessive axial length of the eyeball resulting in vision problems (McBrien, 2013).

Furthermore, there may be other factors that can be related to the incidence of myopia in these samples. Another risk factors obtain from questionnare was an outdoor activities. Myopia samples who carry out outdoor activities less than 200 minutes per day in 14 samples compared to samples who were not myopia (12 samples). This is accordance with research conducted by Mutti in 2002 which stated that children with myopia spend less time outdoors activities, for example exercising (Mutti et al., 2002). Children who spend less than 200 minutes per day doing outdoor activities had risk of myopia (Wu et al., 2018). The increasing of intensity of light exposure outdoors will mediate dopamine release from the retina due to stimulation by sunlight which can reduce the axial lengthening of the eyeball. This is called the light-dopamine hypothesis (French et al., 2013).

**Conclusion**

In this study myopia casehave not assosiation with genetic family histories, other factors can be came influences develoment of myopia in adolescents. Further studies are need to explore other factor that influence for myopia incidence in adolescent that can be modified to reduced the incidence.

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**CONFLICT OF INTEREST**

There are no conflicts of interest to declare.(2017) that the search for health information used by the people is television, online media or credible website portal sites, and social media is sharing information from the group Whatsapp, LINE Group, and BBM Group.

The print media such as books, leaflets, posters, and print media were present continues to grow through creative ideas such as the calendar method is one source of information available to the public at Lubuk Buaya Primary Health Center Padang City. According to research Yulida (2018) that mothers get the information from the media about the health promotion MR vaccine has an interest to participate than mothers who do not get the information. This is in line with research by Smith et al (2017) that need improvement in obtaining information about the vaccine by the public.

Providers also a source of information for the community, midwives, medical personnel in hospitals and health centers. Skills needed by health personnel when giving continuous medical information and provide advice to families includes communicating clearly and regularly, listening to every question and concern for family members, as well as providing advice to the family members of any public health needs (Friedman, 2014). For that health workers have an important role in providing information about immunization MR. According to research conducted by Nolna et al (2018) that one of the problems that led to parents not to immunize is bad manners and lack of health personnel immunization of health workers.

**Socio-cultural relationship with childhood immunization at 9 months to 5 years.**

Results of statistical test by using Chi-Square test showed the value of $p = 0.000$ ($p < 0.1$). Based on these results it can be concluded that there is a significant relationship between socio-cultural MR immunization in children aged 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City.The results are consistent with international studies conducted Man (2017) in India that there is a high correlation between the culture in influencing child immunization. Based on international research Alshammari, majority of respondents (89.9%) know the recommended immunizations, encourage other parents to do the immunization, as well as the confidence and acceptance of the vaccine, vaccine-related perceptions of health benefits and ease of access to immunization, where it is a socio-cultural substance and impacts both parents in Saudi Arabia is working to immunize her child (Alshammari, 2018).

Cultural barriers related to the way of life and belief systems, differences in perception or point of view, the attitude of traditionalism prejudiced against new things, is problematic culture that affects the mother in immunization MR (Setiadi, 2013). In the study Mechanic explained that the underlying barriers to immunization MR is social influence certain culture of how people acquire and address information from sources they trust and do not trust, their own perspective as well as the type of information that they consider credible and relevant to their situation ( Mechanix, 2002).

The times promote a change in culture. Culture that trust by a group will inevitably shift In this case the rejection of immunization will be through the process of diffusion (spread of culture) that give rise to conflict between groups who want change with groups that do not want change. What is needed here is social control in the community, which became a "whip" for the group with the same culture so that they can sort out, where appropriate culture which is not appropriate. It can be concluded that the granting or refusal of immunization in children because culture is a common thing in the social environment (Setiadi, 2013).

Residents live in a social reality that they create collectively, the emergence of thought would be a renewal in society enabling socio-cultural changes. Positive social change to encourage people to think ahead so as to the formation of a good social and cultural life and vice versa. One example of an impact on the status of immunization MR in children aged 9 months to 15 years. The existence of a good social culture where people tertuntut to think forward, also will push to familiar immunization in the community.

## V. CONCLUSION

Based on the results of research on "Social relations and cultural resources to immunization Measles Rubella (MR) in Puskesmas Padang Lubuk Buaya in 2019", it can be concluded as follows:

1. MR Immunization frequency distribution in Lubuk Buaya Primary Health Center Padang City including public health problem because not yet reached the minimum target of national immunization is 95%
2. The frequency distribution obtained resources immunizing mothers with MR in Lubuk Buaya Primary Health Center Padang City in 2019mostly include both categories. Better resources obtained by the mother the higher the mother's level of participation in the Measles Rubella immunization in children. Various sources of information obtained by the mother is out of print media, electronic media, and healthcare.
3. The frequency distribution of socio-cultural MR immunization in Puskesmas Padang Kota Lubuk Buaya mostly categorized as good and most of the other less well. Socio-cultural influence on participationMR mother in immunization depends on two different sides of the socio-cultural exposure that is positive or negative depending on the relevance of the social perception of the mother in the culture itself.

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# Antenatal Care Relationship with Baby Birth Weight in the Working Area of LubukBuaya Health Center

**Hariadi[1], Meilinda Agus[2], Alfi Syahrin[3]**

[1]*DepartmenObstetric and Gynecology, RSUP DR M. Djamil, Padang, Indonesia*
[2] *Departemen of Diploma Midwifery Program, PoltekesKemenkes Padang, Jl. Gajah Mada, Gn. Pangilun Padang, 26476, Indonesia*
[3]*Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
hariadi@med.unand.ac.id

**Abstract**

Infant birth weight is one of the predictors significant to determine the health status of newborns. There are several factors that can affect the baby's birth weight including maternal factors, fetal factors, placental factors and environmental factors. However, all these factors can be prevented and detected early through *antenatal care*. This study aims to determine the relationship between *antenatal care* and infant birth weight in the work area of LubukBuaya Health Center 2017. This type of research is an observational analytic study using adesign*cross sectional*, data collection was carried out in July to July 2018. The population in this study was all mothers who gave birth in the work area of Lubuk Buaya Health Center in January 2017-December 2017 were 1382 people. The sample size of the study was 80 subjects. Sampling is done bytechnique*Simple Random Sampling*. Data processing was done bytest*Chi-Square* ($p < 0.05$) using SPSS 16 software. The results showed that the percentage of LBW was 18.8%. The results of*analysis**chi-square* showed that *antenatal care* had a significant relationship with infant birth weight ($p = 0.002$).
Pregnant women whose *antenatal care* is incomplete have the risk of delivering low birth weight babies.

**Keywords** : Birth weight, antenatal care

## INTRODUCTION

Healthy pregnancies require preparation, both physical and mental preparation, therefore planning for pregnancy must be done before the pregnancy to have a positive impact on the physical and psychological adaptation of the mother during pregnancy and good fetal conditions (Oktalia and Herizasyam, 2016). Based on WHO data (2013) 4 out of 10 women experience an unplanned pregnancy, as a result women and their partners are late in getting essential health interventions during pregnancy by up to 40%.

Planning that can be done to improve maternal and child health is by preconception screening. Preconception screening can identify several risk factors that may occur such as women who experience hemoglobin deficiency, folic acid deficiency, and behavior that can interfere with maternal and fetal health during pregnancy (Williams *et al*, 2012).

Maternal health during pregnancy has a very important role for the baby, because if the mother maintains her health before and during pregnancy it will give birth to the baby in normal conditions and can prevent the baby from being born prematurely and low in weight, thus giving the baby the opportunity to start a healthy life ( CDC, 2006)

Globally, it is estimated that 15% to 20% of all live births worldwide are LBW (WHO, 2014). In Indonesia the prevalence of LBW in 2013 was 10.2%, the prevalence was lower than in 2010,

which was 11.1%, but the decline did not give a significant meaning to LBW cases (Ministry of Health, 2013), while for West Sumatra there was an increase in the incidence of LBW in the amount of 1,812 (2.2%) cases in 2013 to 2,066 (2.2%) cases in 2014 (West Sumatra Health Office, 2015). LBW incidence in Padang City in 2015 was 2.17% and in 2016 it was 2.10%. The incidence of LBW in LubukBuaya Health Center in the last two years was 1.85% in 2015 and 1.79% in 2016.

Infant birth weight is one of the significant predictors for determining the health status of newborns, if weight Normal birth will bring benefits such as good intellectual ability, but if the baby's body weight is abnormal then the baby will be vulnerable to cardiovascular disease, metabolic diseases as adults and delays in growth and development (Nazari*et al*, 2013).

Research (Pondaag*et al*, 2015: 135) shows that babies born with LBW have a risk of developing asthma in children with p = 0.008. In addition, according to (Chapakia*et al*, 2016: 12) a history of low birth weight has a risk for fine motor development delay in children aged 2-5 years with p = 0.02 and OR = 5.

To find out or detect the risk of early Fetal development can be known from *antenatal care* (ANC). Detection of risk factors during *antenatal care* will make health workers able to intervene and deal more quickly with the risk factors found with the aim of getting a normal baby.

*Antenatal care* according to the standard is the service provided to pregnant women at least 4 times during pregnancy, if complications are not found, with a one-time first trimester schedule, once in the second trimester and twice in the third trimester by competent and authorized health workers (PMK 97, 2014).

*antenatal care*Incompletehas the opportunity to give birth to babies with LBW of 3.73 times compared to complete ANC (Diniya*et al*., 2016: 4). Other studies say, ANC that is less than 4 times has the opportunity to give birth to a low birth weight baby 6 times (Rotua, 2010: 52). Likewise with the study conducted by Ahmed *et al* (2012: 4) in Pakistan with an opportunity of 5.54 times greater for the incidence of low birth weight babies.

Several studies have shown a link between *antenatal care* and infant birth weight. Research conducted by Ruindungan*et al*, 2017 in the Tobelo Regional Hospital Working Area obtained p = 0.001 and OR = 3,000 that there was a relationship between *antenatal care* and infant birth weight. Ernawati, *et al.* (2011: 7) study of the relationship between *antenatal care* and infant birth weight in Indonesia, which is OR = 2.03 (95% CI: 1.463-2.82), which means that there is a real *antenatal care*

The coverage of *antenatal care* in Indonesia in 2015 was K4 of 87.48%, then in 2016 K4 visits amounted to 85.38% (Ministry of Health RI, 2017). The coverage of *antenatal care* in Padang City in 2015 was K1 of 100.28% and K4 visits of 95.61% while in 2016 K1 visits were 99.58% and K4 visits were 96.29%. *Antenatal care* at LubukBuaya Public Health Center is the lowest percentage of several health centers in Padang City, where K1 visits were 85.5% while K4 visits were 83.1% (Padang Health Office, 2017).

The results of preliminary research conducted in the working area of LubukBuaya Health Center on April 14, 2018 in 10mothers *postpartum*, found 9 mothers (90%)visits*antenatal care* complete with normal birth weight and 1 mother (10%) visited *antenatal care* incomplete with low birth weight. Based on the background description above, the researcher is interested in knowing the relationship between *antenatal care* and the weight of a new baby born in the working area of the LubukBuaya Health Center.

**Method**

researchis analytic research with cross sectional design. The study population was all pregnant women who gave birth. Samples were taken using *simple random sampling technique.* Data collection was conducted in February-July 2018 by recording medical record data as many as 80 respondents in the working area of the LubukBuaya Health Center Padang. Data analysis was univariate and bivariate withanalysis*chi-square* ($p \leq 0.05$).

## Results

### Univariate Analysis

Table 2. Distribution ofFrequency of *AntenatalCare*Maternalin January 2017-December 2017 in the Working Area of LubukBuaya Health Center

| ANC | f (n = 80) | (%) |
|---|---|---|
| Not Complete | 21 | 26.2 |
| Complete | 59 | 73.8 |
| Total | 80 | 100 |

From table 2.above can be seen that as many as 59 women (73.8%) had a *antenatal care* completeand 21 mothers (26.2%) had *antenatal care* nocomplete.

Table 3. Distribution of Baby Birth Weight in January 2017-December 2017 in the Working Area of LubukBuaya Health Center

| Birth Weight | f (n = 80) | (%) |
|---|---|---|
| BBLR | 15 | 18.8 |
| Normal | 65 | 81.2 |
| Total | 80 | 100 |

From table 3 above seen that as many as 65 babies (81.2%) were born with normal weight and 15 babies (18.8%) were born with low body weight.

### Bivariate analysis

**Table 4. Relationship *Antenatal Care* with birth weight babies in January 2017-December 2017 in LubukBuayaPuskesmas**

| *Antenatal Care* | Berat Badan Lahir Bayi | | | | Total | | P Value |
|---|---|---|---|---|---|---|---|
| | BBLR | | Normal | | | | |
| | f | % | f | % | f | % | |
| Tidak Lengkap | 9 | 42,9 | 12 | 57,1 | 21 | 100 | |
| Lengkap | 6 | 10,2 | 53 | 89,8 | 59 | 100 | 0,002 |
| Total | 15 | 18,8 | 65 | 81,2 | 80 | 100 | |

Based on Table 4 above shows that the percentage of low birth weight babies is higher in women with *antenatal care* is notcomplete (42.9%) compared tomothers*antenatal care*

complete(10.2%). Statistical test results usingtest*Chi-Square* obtained p value = 0.002 (p <0.05). Based on these results it can be concluded that there is a significant relationship between *antenatal care* and infant birth weight.

**DISCUSSION OF**
**ANTENATAL CARE**

Based on the results of thefrequency study *antenatal care* in January 2017-December 2017 in the working area of the LubukBuaya Health Center, it was found that the percentage ofvisits was *antenatal care* mothers'≥ 4 times higher than the frequency ofvisits*antenatal care* <4 times, namely 73.8% . The results of this study are lower than the target set by the Ministry of Health of the Republic of Indonesia in 2017 which is 80% and lower than the target of Padang City in 2017 which is 95% (Ministry of Health Republic of Indonesia, 2017; Health Office of Padang, 2017). The results of this study are in line with the research conducted by Sormin*et al* (2016) in the working area of the City of Sikumana Health Center in Kupang which found that the percentage of ANC frequency ≥ 4 times was 71.8%.

*Antenatal care* is a service provided to pregnant women at least 4 times during pregnancy. The defined service standards are useful for monitoring the progress of pregnancy, to ensure maternal and fetal growth and development, to recognize early risk factors and possible complications (PMK 43, 2016). *Antenatal care is* highly recommended for pregnant women, because the physical and psychological conditions of pregnant women are always changing, so it does not rule out the possibility that as the pregnancy progresses the mother will experience a high risk of pregnancy (Wilujeng, 2014).

The high percentage of *antenatal care* completein this study can be caused by the majority of complete respondents doing ANC because this can be caused by the majority of respondents' work, namely 75% are housewives so that mothers have more time to conduct examinations, pay attention to maternal and fetal health and looking for information related to pregnancy. With the existence of employment status or having other activities other than being a housewife, can make pregnant women experience fatigue and affect the content and lack of time for the mother to check her pregnancy to health workers (Susanto*et al*,2016).

In addition, based on age data, most mothers (85%) were aged 20-35 years, so that the level of maturity of mothers would be better in thinking and acting on their health. According to Padila (2014), the increasing age of a person, the maturity in thinking will be better, so that he is motivated in doing ANC and knows the importance of ANC to the health of himself and the fetus they contain.

Age can stimulate one's mindset and capture power. If the mother's age increases, the reasoning and the catching power will grow and develop. This is a positive thing if there are many pregnant women in the healthy reproductive age category with the age limit of 20-35 years, which indicates an increase in maternal awareness to have their pregnancies checked.

**Infant Birth Weight The**

results showed that infant birth weight was mostly in the normal category of 81.2%, while babies born with low birth weight were 18.8%. This result is higher than the percentage of LBW nationally in 2017 which is 8% and higher compared to the percentage of LBW in Padang City in 2017 which is 2.10% (Ministry of Health Republic of Indonesia, 2017; City Health Office of Padang, 2017). This is probably because the coverage of data collection in the LBW survey nationally is wider and covers all regions in Indonesia, as well as the extent of data collection coverage in the 2017 survey in Padang City.

The results of this study are in line with the research of Zahrotin and Budi (2012) at the Tanah Kali Kedinding Health Center showing that birth weight is low at 14%. The results of this study are also in line with the research of Ahmed *et al* (2012) in the Chitral region of Pakistan who found that babies with low birth weight were 16%.

The high rate of LBW in this study can be caused by the presence of mothers who are pregnant at the age above 35 years, because this age is a high risk age for pregnancy and childbirth. The age of pregnant women can affect mothers to give birth to babies with low birth weight. According to research by Pamungkas*et al* (2015), pregnancies under the age of 20 years and above 35 years are high-risk pregnancies both in the mother and the baby.

Pregnancy at a young age is a risk factor for LBW, this is due to the immaturity of the reproductive organs to become pregnant, so that it can be detrimental to maternal health and fetal growth and development. While the age above 35 years is also at risk of giving birth to low birth weight babies because mothers are more prone to degenerative diseases and the condition of the mother's body has begun to decline (Pamungkas*et al*, 2015).

In addition, it can also be caused because there are still mothers who have a large parity of 3, because mothers who give birth to children are more than three times at high risk of giving birth to LBW babies. According to Khoiriah's research (2017), repeated pregnancies will cause damage to blood vessels in the uterine wall and the deterioration of elasticity of tissue that has been stretched repeatedly during pregnancy will affect maternal nutrition to the fetus, which can cause growth disruption fetus and give birth to babies with LBW.

**Relationship *Antenatal Care* with Baby Birth Weight**

Statistical test results using thetest*Chi-Square* showed p = 0.002 (p <0.05). Based on these results it can be concluded that there is a significant relationship between *antenatal care* and infant birth weight in the work area of LubukBuaya Public Health Center in 2017. The results of this study are in line with Demelash's (2015) study at the Southeast Ethiopian Bale Zone Hospital which showed a significant relationship between *antenatal care* and infant birth weight where the value is (p = 0.002). The results of this study in accordance with the theory stated above that mothers with ANC who are less than 4 times have a greater risk of delivering LBW babies, this is because *antenatal care is* very important to monitor fetal health and protection to the mother including providing counseling and counseling during pregnancy ( Adriaansz, 2008) The results of this study are not in accordance with the research conducted by Saputra (2016) in RSUDZA Banda Aceh which showed that there was no significant relationship between *antenatal care* and infant birth weight where the value of p = 0.463.

The results of this study are supported by Mutmainna (2017) which states that *antenatal care* is one of the efforts that aims to detect early complications during pregnancy so as to prevent the birth of low birth weight babies and prepare the mother's physical and mental health and save the mother in pregnancy. childbirth and postpartum. *antenatal care* Completeclosely related to baby's birth weight so that it indirectly has a positive effect on fetal health in the womb (Kasim*et al*, 2011).

The results of this study found that 9 mothers (42.9%) *antenatal care*incompletegave birth to LBW, this is because the frequency of *antenatal care* is one of the things that play a role in reducing the risk of LBW, because *antenatal care* is an important indicator in increasing awareness and monitoring maternal health during pregnancy and the fetus. Pregnant women who do not complete *antenatal care* cause no detection of risks and complications that occur during pregnancy that threaten him and his fetus. The impact of incomplete ANC carried out by mothers is that mothers will

be less informed about how to maintain a good pregnancy and not detectable diseases and complications experienced by the mother and fetus.

The results of this study are in accordance with the above theory and it can be concluded that mothers who are *antenatal care* less than 4 timeshave a risk of having LBW babies, this can be caused by undetectable or maternal and fetal health during pregnancy so that it can interfere with growth and developing fetus. So, what can be done by the mother is by increasing *antenatal care* at least 4 times during pregnancy so that the risk of LBW can be monitored and prevented by health workers (Wilujeng, 2014).

The results of this study also found that mothers whose *antenatal care* was complete but the baby was born with a low birth weight of 6 (10.2%) babies. This is because what affects the occurrence of LBW is not only *antenatal care for* pregnant women, there are other factors such as maternal age at risk, high parity, nutritional status of pregnant women, maternal socioeconomic, maternal education and weight gain of pregnant women. This is because the causes of LBW are multifactorial and some of the causative factors both single and combined are associated with LBW.

Then it can be said that mothers who do *antenatal care* completewill have a positive effect on the baby's birth weight, because it is illustrated in this study that most babies born with normal weight (89.8%) have *antenatal care* in the full category.

## Conclusion

There is a significant relationship between antenatal care and infant birth weight.


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# Effect of Premarital Sex Education with Peer Education Method to Improving Youth Knowledge and Attitude about Premarital Sexual Behavior at Vocational School "XY" in Padang City

**Erda Mutiara Halida[1], Feni Andriani[2], Dian Septiriani [3]**

[1] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[2] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[3] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
erdamutiarahalida@med.unand.ac.id[1]

**Abstract**

Adolescence has so many problems one premarital sexual behavior. This is because changes in physical, psychological and intellectual encourage teenagers in risky behavior. The purpose of this study was to observe the effect of premarital sex education with peer education methods to increase knowledge and attitudes about premarital sexual behavior in SMK "XY" Padang.

The type of this research is *Pre-Experiment* with *One Group Pretest-Posttest design*. Data collection was collected in May to July 2019. The population in this study was tenth grade Vocational school students in Padang area on 2018/2019 academic year. It's about 531 people. The amount sample of this research was 60 subjects. The sample was taken by *simple random sampling* technique. Data processing was carried out by *Wilcoxon Test* ($p < 0.05$) using SPSS 17 software.

The results showed that there was an improve in the knowledge and attitudes of adolescents about premarital sexual behavior aftergiven education by the peer education method. The results of the Wilcoxon test analysis obtained p value of the effect of premarital sex education with the peer education method on increasing adolescent knowledge about premarital sex behavior ($p = 0,000$).

There is the influence of premarital sex education with peer education methods to improve the knowledge and attitudes of adolescents about premarital sexual behavior in Vocational School "XY" Padang in 2019

**Keywords** : *Peer education,*Premarital sexual behavior, Adolescence

## INTRODUCTION

According to WHO (2018), adolescence is the population in the age range 10-19 years, according to Permenkes No. 25 of 2014, teens are resident in the age range of 10-18 years and by entities Population and Family Planning (BKKBN) on teens are 10-24 years old and unmarried. The different definitions show that there is no universal agreement about the limits this age group. However, adolescence was associated with the transition from children to adulthood (Kemenkes, 2012).

Of the many risk behavior committed by adolescents, premarital sex is still a major problem. Sexual behavior can result in Unwanted pregnancy (KTD), unsafe abortion, changeof sexual couples and other behaviors that are at risk for transmission of diseases caused by sexually transmitted infections including Human Imunodeficiency Virus (HIV) (Kemenkes, 2014).

Based on data from (CDE & P) (2017), 41% of adolescents in the United States ever had sexual intercourse and about 230,000 babies were born from adolescents aged 15-19 years. Plan International Australia found that teenage pregnancy rate in the 15-19 age in poor and developing countries of Asia-Pacific region has increased in the last 10 years, from 18 to 23 per 1000 live births (Plan International, 2018).

Data from SDKI (2017), young men who had sexual intercourse was higher than female adolescents. KPAIin coordination with the Kemenkes conducted a survey in various major cities in Indonesia declares a sign that 62.7% of adolescents in Indonesia for having sex outside of marriage, it is appropriate to say Indonesia entered a period of free sex emergency (Kompasiana, 2018).

From interviews with one of the staff Civil Service Police Unit (Satpol PP) Padang, for the last 5 years is an increase in cases of premarital sex among adolescents and of the data obtained in April 2018, caught a pair of students from one of the SMK Padang was sleeping alone misconstrued one dorm room Padang.

If viewed from the factors influencing adolescent premarital sexual behavior in general is influenced by various factors such as family, upbringing, personality, changing times, neighborhood, gender, level of knowledge, socio-cultural aspects, to peers. Peers is one of the dominant factors for the more mature person so the influence of peer group or peer will also be more powerful because someone is going to spend more time with friends (Desmarnita et al., 2014 in Ningrum, 2017).

Peers who have a great influence for youth-based education makes peer group (peers) can be more effective. Nowadays education by peer group began to become one of the strategies that popular in various regions, countries and groups of health program development (Jannah, 2014 in Andini, 2017).

Research by Suparmi and Isfandari (2016) about the role of peers toward premarital sexual behavior in adolescent boys and girls in Indonesia also show peers have a role in premarital sexual behavior both in young men and women, the influence of peers on adolescent boys higher than among girls. In the dale's cone of experience stated that education in which there is a discussion of activities such as education using peer education methods provide memory to someone as much as 50% compared to read or hear.

Based on the Explanation above, researchers interested in conducting research with the title "Effect of Premarital Sex Education with Peer Education Method to Improving Youth Knowledge and Attitude about Premarital Sexual Behavior at Vocational School "XY" in Padang City".

## METHOD

This type of research is pre experiment with design one group pretest-posttest. Data collection was conducted in May and July 2019. The population in this study were students of class X Vocational School "XY" Padang 2018/2019 school year as many as 531 people. Large sample taken is as much as 58 subjects. Sampling is done by simple random sampling technique. Data processing was performed with the Wilcoxon test ($p < 0.05$) using SPSS 17 software.

## RESULTS

This research was conducted on the learner class X SMK "XY" of the city of Padang. Characteristics of respondents were involved in this study included age, gender, source of information. The frequency distribution characteristics of the respondents are presented in Table 5.1

**Table 5.1 Frequency Distribution Characteristics of Respondents**

| No. | characteristics of Respondents | N | % |
|---|---|---|---|
| 1 | Age | | |
| | Middle adolescents (14-16 years) | 42 | 72.4 |
| | Late adolescents (17-20 years) | 16 | 27.6 |
| 2 | Gender | | |
| | Male | 29 | 50.0 |
| | Female | 29 | 50.0 |
| 3 | Resources | | |
| | Electronic media | 34 | 58.6 |
| | Print media | 24 | 41.4 |
| | **Total** | 58 | 100 |

Based on Table 5.1 Age characteristics 72.4% of respondents are in the middle teens categories, namely at the age of 14-16 years. Based on the characteristics of sex, the number of respondents male and female respectively of 29 people (50%). While the characteristics of knowledge resources, 58.6% of respondents chose the electronic media.

**Univariate Analysis Results**

**Table 5.2 Distribution of Knowledge of Students on Premarital Sexual Behavior Before and After premarital sex education given by the method of Peer Education.**

| Knowledge of Premarital Sexual Behavior | Respondents group | | | |
|---|---|---|---|---|
| | *Pretest* | | *posttest* | |
| | N | % | N | % |
| Less | 6 | 10.3 | 0 | 0 |
| Enough | 35 | 60.3 | 7 | 12.1 |
| Well | 17 | 29.3 | 51 | 87.9 |
| **Total** | 58 | 100 | 58 | 100 |

Based on Table 5.2 above can be seen that before being given premarital sex education with peer education method were 17 (29.3%) of respondents have good knowledge, 35 people (60.3%) of respondents have sufficient knowledge and 6 (10, 3%) have less knowledge about premarital sexual behavior. Meanwhile, after being given premarital sex education with peer education method 51 (87.9%) of respondents have a good knowledge and 7 (12.1%) of respondents have enough knowledge about premarital sexual behavior.

**Table 5.3 Distribution of Attitude of Students about Premarital Sexual Behavior Before and After premarital sex education given by the method of Peer Education.**

| Attitudes About Premarital Sexual Behavior | Respondents group | | | |
|---|---|---|---|---|
| | *pretest* | | *posttest* | |
| | N | % | N | % |
| Negative | 7 | 12.1 | 0 | 0 |
| Positive | 51 | 87.9 | 58 | 100 |
| **Total** | 58 | 100 | 58 | 100 |

Based on Table 5.3 it can be seen that before being given premarital sex education with peer education method were 51 people (87.9%) of respondents have a positive attitude, and as many as 7 people (21.1%) of respondents have a negative attitude. Meanwhile, after being given premarital sex education with peer education method 58 (100%) of respondents have a positive attitude about premarital sexual behavior.

**Bivariate Analysis Results**

Of normality test results showed that for the knowledge pretest value of $p = 0.001$ ($p < 0.05$), knowledge posttest value of $p = 0.001$ ($p < 0.05$), attitude pretest value of $p = 0.167$ ($p > 0.05$), attitude posttest value of $p = 0.001$ ($p < 0.05$). Hypothesis test used for data knowledge and attitude is the Wilcoxon test.

**Table 5.4 Effect of Premarital Sex Education with the method of Peer Education on Knowledge Improvement in vocational "XY" Padang**

Table 5.4 shows that the average score given respondents' knowledge before intervention becomes 7.121 and 8.707 after receiving the intervention, so that it can be seen the average difference before and after the intervention, namely 1,586. No one research results of respondents who experienced a decrease in the score of knowledge, 46 respondents experienced an increase in knowledge scores, and 12 respondents has constant score in knowledge. Statistical test results obtained value of p = 0.000 (p <0.05), the Ha received that has an influence on adolescent knowledge before and after the intervention. Means there is an average difference of knowledge about premarital sexual behavior in adolescents before and after intervention.

**Table 5.5 Effect of Premarital Sex Education with the method of Peer Education on vocational attitude "XY" Padang**

Table 5.5 shows that the average score of the attitude of the respondent before the given intervention and became 35.121 31.414 after receiving the intervention, so that it can be seen the average difference before and after the intervention, namely 3,707. On the results of the study are one respondent that experienced a decrease in scores attitudes, 42 respondents experienced an increase in the score of attitude, and 15 respondents has a score that remained in its position. Statistical test results obtained value of p = 0.001 (p <0.05), the Ha received that has an influence on the behavior of teenagers before and after intervention. Means there are differences in average attitudes about premarital sexual behavior in adolescents before and after intervention.

## DISCUSSION

### Knowledge Before and After granted Peer Education

The results showed that before being given premarital sex education with peer education method were 17 (29.3%) of respondents have good knowledge, 35 people (60.3%) of respondents have sufficient knowledge and 6 (10.3%) respondents who have less knowledge about premarital sexual behavior. Meanwhile, after being given premarital sex education with peer education method 51 (87.9%) of respondents have a good knowledge and 7 (12.1%) of respondents have enough knowledge about premarital sexual behavior.

Health education given by peers would be easy to remember and understand because teens will be more open and more easily communicate with each other than with their parents or other adults. Thus simplifying the process of delivering information to improve knowledge of adolescents about premarital sexual behavior.

This is in line with research conducted by Oktarina, et al in 2016 that there was an increase of reproductive health knowledge in grade 1 student who received reproductive health education by peer educators, an increase of as much as 60% less knowledge into better knowledge as much as 80%. Compared to the control group that did not have significant changes, namely 56% haveless knowledge become 40% sufficient knowledge.

### Attitudes Before and After granted Peer Education

The results showed that before being given premarital sex education with peer education method were 51 people (87.9%) of respondents have a positive attitude, and as many as 7 people (21.1%) of respondents have a negative attitude. Meanwhile, after being given premarital sex education with peer education method 58 (100%) of respondents have a positive attitude about premarital sexual behavior.

This is in line with research conducted by Marlita in 2016 that the changes in sexual behavior (knowledge, attitudes, and actions) towards the better as it provides peer education intervention.

According Rofi'ah, et al (2017) with peers, teens will be more open and easier to communicate with than with parents and teachers. The information is sensitive and less comfortable if delivered by adults can be delivered by peers using age appropriate language. Thus, the information is more complete, easier to understand and ultimately achievable goal. This indicates that the change in attitude in the treatment group affected by the outcome of individual interactions with the environment obtained by the respondent through the process of learning in peer education.

**Effect of Premarital Sex Education Method of Peer Education on Knowledge Improvement**

The results showed that no one respondents who experienced decrease in knowledge score, 46 respondents experienced an increase in knowledge scores, and 12 respondents has a score that remained on his knowledge. Statistical test results obtained value of $p = 0.001$ ($p < 0.05$) that there is an influence on adolescent knowledge before and after the intervention.

No one respondent decrease in scores because most teenagers already have enough knowledge of the category regarding premarital sexual behavior before the given intervention. Knowledge of premarital sexual behavior is usually they get from the media as well as gather with their peers.

This is in line with research conducted by Suriani and Hermansyah in 2014 that the delivery of reproductive health education by peer group influence the improvement of adolescent knowledge. Research conducted by Kim and Free in 2008 that an increase in knowledge after being given sex education by peer education method.

According Notoatmodjo (2010) knowledge is the result of know somebody against its object through the senses. Knowledge can be obtained from the education, the experience of self and others, the mass media and the environment. For teenagers, peer is a place to share experiences and information, most of the time they have spent with friends than with parents, teachers and others. So many health education program that uses peer as a medium to share information in the promotion and preventive efforts.

**Effect of Premarital Sex Education Method of Peer Education on Attitude**

The results showed that there were one respondent experienced decrease in scores attitudes but the decline was categorized into a positive attitude, 42 respondents experienced an increase in the score of attitude, and 15 respondents has a score that remained in its position. Statistical test result p value = 0.001 $p < 0.05$), there is an influence on adolescent attitudes before and after the intervention.

*peer education*is one form of health education interventions involving peers as an alternative to the provision of health information, including the dangers of premarital sexual behavior. For teenagers, friends are the people who can be trusted where it is supported by research conducted by Rofi'ah, et al in 2017 which showed that with peers, teens will be more open and easier to communicate with than with parents and teachers.

The information is sensitive and less comfortable if delivered by adults can be delivered by peers using age appropriate language. Thus, the information is more complete, easier to understand and ultimately achievable goal. This indicates that the change in attitude in the treatment group affected by the outcome of individual interactions with the environment obtained by the respondent through the process of learning in peer education.

According Raditya in Laras (2017), suggests that adolescent sexuality education provided by the peer educators will be able to provide the knowledge that is expected to change its attitude. So from several studies have shown that health education with the methods of peer education or peer not only increase knowledge of adolescents about sex before marriage but also adolescent attitude in the face of premarital sexual behavior it supported research conducted Wandut, et al (2012) say that the influence of peer education on knowledge and attitudes of adolescents to sexuality.

## CONCLUSION

Knowledge teens about premarital sexual behavior before being given premarital sex education with peer education method largely have enough knowledge categories. After being given the intervention, adolescent knowledge about premarital sexual behavior with the knowledge most have either category.

Adolescent attitude about premarital sexual behavior before sek premarital education given by the method of peer education mostly has a positive attitude about premarital sexual behavior, only a small proportion of teenagers who have a negative attitude. After being given intervention adolescent attitude about premarital sexual behavior as a whole showed a positive attitude.

There is the influence of premarital sex education with peer education methods to improve the knowledge and attitudes of adolescents about premarital sexual behavior in SMK "XY" of the city of Padang.

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# The Relationship of Knowledge and Attitudes of Pregnant Women about Danger Sign of Pregnancy withAntenatal Care (ANC) Compliance in Third Trimester in Air Tawar Public Health Center In Padang City in 2018

**Ermawati [1], Sunesni[2], Dila Noviana[3]**

[1]*Departemen Obstetry and Gynecology, RSUP Dr. M. Djamil, Padang, Indonesia*

[2]*Health Polytecnic Mercu Bakti Jaya , Surau Gadang, Padang, Indonesia*

[3] *Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*

ermawati@gmail.com

**Abstract**

The Maternal Mortality Rate in Indonesia is still high because it has not reached the 2015 target. The high maternal and infant mortality rates can be influenced by knowledge, attitudes, and adherence to Antenatal Care visits for pregnant women. The purpose of this study was to determine the relationship of knowledge and attitudes of pregnant women about the danger signs of pregnancy with Antenatal Care (ANC) compliance in the third trimester at Air Tawar Public Health Center, Padang City in 2018. Quantitative research with the cross-sectional design was carried out in the working area of Air Tawar Public Health Center from March 2018-January 2019. The research respondents were 38 people of third-trimester pregnant women. The research instrument used was a questionnaire. Data analysis was univariate and bivariate using chi-square analysis. The results showed that 21.1% of respondents did not comply ANC visits with less knowledge (77.8%) and with good knowledge (3.4%), and had a negative attitude (41.7%) and had a positive attitude (11, 5%). The results of the bivariate analysis showed that there was a relationship between knowledge (p = 0,000) and there was no relationship between attitudes (p = 0.81) and adherence to Antenatal Care visits.There is a relationship between knowledge of pregnancy danger signs and adherence to Antenatal Care visits in third-trimester pregnant women and there is no relationship between attitudes of the danger sign pregnancy and adherence to Antenatal Care visits in the third-trimester pregnant women

**Keywords** : Knowledge, attitudes, and danger signs of pregnancy

## INTRODUCTION

*World Health Organization* (WHO)stated that in 2015 around 830 / day women died worldwide due to complications of pregnancy and childbirth, while the overall Maternal Mortality Rate (MMR) was 303,000 / 100,000 live births. Almost all maternal deaths occur in developing countries, where more than half of deaths occur in Sub-Saharan Africa and almost one third occur in South Asia. This is still in the high category because it has not reached the target of *Sustainable Development Goals* (SDG's), which is <70 per 100,000 live births (WHO, 2018).

Indonesia is one of the developing countries in Southeast Asia with a high maternal mortality rate. Based on the results of the 2015 Intercensal Population Survey (SUPAS) in getting 305 maternal deaths per 100,000 live births, this poses a challenge for the government to achieve the 2015-2019 National Medium Term Development Plan (RPJMN) target of 102 per 100,000 live births (RI Ministry of Health, 2017; Central Statistics Agency, 2016). West Sumatra is one of the provinces in Indonesia, with AKI as many as 111 people in 2015 and there was a slight decline in 2016 which was 107 people (West Sumatra Health Office, 2017). From 12 districts and 7 cities in West Sumatra Province, Padang City is one of the highest-ranking cities with 20 AKI (Padang City Health Office, 2017; West Sumatra Health Office, 2017).

The main causes of death for pregnant women are bleeding, hypertension, infection, and indirect causes, largely due to interactions between existing medical conditions and pregnancy (WHO, 2018). Based on the Center for Data and Information at the Ministry of Health (Information), in 2013 the maternal mortality rate was caused by bleeding 30.3%, preeclampsia 27.1, infection 7.3%, and caused by others, namely 40.8% ( RI Ministry of Health, 2014).

One of the causes of the high maternal mortality rate is the complication of pregnancy which can arise through the danger signs of pregnancy. Based on these causes pregnancy is at high risk or complications of pregnancy usually occur due to factors 4 too and 3 late: Factor 4 Too, namely: (1) Too young (less than 20 years); (2) Too old (more than 35 years); (3) Too often pregnant (children more than 3); (4) Too close or the pregnancy distance meeting (less than 2 years). Factor 3 Too late, namely: (1) Too late to make a decision to seek emergency medical efforts; (2) Too late to arrive at a health facility; (3) Too late to get medical help (Indonesian Ministry of Health, 2016).

The danger sign of pregnancy is a sign or symptom that indicates the mother or baby she is pregnant in danger (Saifuddin, 2010). Every pregnancy in its development has the risk of experiencing complications or complications (Wiknjosastro, 2010). If pregnant women do not carry out the examination, it will not be known whether the pregnancy is going well, experiencing high risk or obstetric complications that can endanger the lives of the mother and fetus, so that they can increase morbidity and mortality are high (Saifuddin, 2010). Pregnant women need regular antenatal care, according to the standards for quality antenatal care (Wiknjosastro, 2010). Therefore, it is necessary to do early detection by health workers and the public about the presence of risk factors and complications, and adequate management as early as possible. Early detection by carrying out an examination in pregnancy is the key to success in reducing maternal and neonatal mortality (Ministry of Health, 2010).

According to WHO *Antenatal Care* (ANC) aims to detect the occurrence of high risk of pregnancy and childbirth, and also can reduce AKI and monitor the state of the fetus. In addition, the aim is to detect abnormalities that may or may arise in pregnancy so that they are quickly known and can be immediately resolved before they affect the health of the mother and fetus (Winkjosatro, 2010).

According to the 2016 Indonesian Health Profile, the ANC service standards carried out by health workers are 10T standards and minimum service frequencyANC is obtained 4 times during pregnancy which is one first trimester, one second trimester and two times in the third trimester. The antenatal period is divided into three trimesters, namely the first trimester (0-12 weeks), second trimester (13-27 weeks), and third trimester (28-40 weeks) (Varney, 2007).

Lack of coverage of pregnant women's visits due to families not aware of the need for prenatal care, they only rely on traditional methods, lack of knowledge, and attitudes of pregnant women about pregnancy visits so that pregnant women and families do not understand the importance of regular pregnancy checks, the difficulty of transportation has an impact on health *Antenatal care* (ANC), and social culture that does not support the *Antenatal care* (ANC) service (Prawirohardjo, 2012).

Assessment of the implementation of health services for pregnant women can be done by looking at the coverage of K1 and K4. K4 Coverage is the number of pregnant women who have received antenatal care according to the standard at least four times according to the recommended schedule in each trimester compared to the target number of pregnant women in one work area for one year. The indicator shows access to health services for pregnant women and the level of compliance of pregnant women in their pregnancy checks to health workers (Ministry of Health, 2017).

Health behavior is strongly influenced by the knowledge, attitudes, and actions of these pregnant women (Maulana, 2009). Knowledge and attitudes of pregnant women about the danger signs of pregnancy have a relationship with maternal visits to health services. Pregnant women often find it difficult to know the danger signs that must be reported, so mothers are encouraged to contact their health care providers or visit health services to obtain this knowledge (Bobak, 2005).

According to the results of the Pratitis study (2014) and Yanti (2016), there was a significant relationship between the level of knowledge of pregnant women about the danger signs of pregnancy and compliance with ANC. Knowledge of pregnant women in recognizing danger signs can be one determinant of pregnancy care to prevent complications. Lack of knowledge of mothers about the

danger signs of pregnancy, childbirth, and childbirth can cause mothers unable to identify the signs that appear so they cannot anticipate early (Mahardani, 2011).

Knowledge of the danger signs of pregnancy is important because if the danger signs are known early on, then treatment will be faster. Early detection of these danger signs by knowing what are the danger signs of the pregnancy (Yulanda, 2014). The level of knowledge influences health attitudes, namely things related to one's actions or activities in choosing and improving health. Including actions to prevent disease, choose food, sanitation and so on (Notoatmojo, 2012).

Attitude is a process of responding (positively or negatively) to a particular person, situation or object (Maulana, 2009). The positive attitude of pregnant women is an attitude that is very enthusiastic to maintain and monitor their pregnancies at all times, while a negative attitude is an attitude that tends not to respond well to pregnancy, such as assuming that each woman will get pregnant and give birth to a health worker. violating customs or habits (Kusumastuti, 2015).

Based on reports obtained from the Padang City Health Office in 2017 for K1 coverage in Padang City in 2016 amounted to 99.58%, K4 was 96.29% and treatment of obstetric complications was 2,582 (70.01%) from 3,688 estimates of pregnant women with complications. Of the 22 Public Healths in Padang City, there were 3 health centers with K1 and K4 coverage which were still lower than the targets of K1 (100%) and K4 (95%) coverage, namely Air Tawar Health Center, Lubuk Buaya and Seberang Padang. Sequentially for K1 coverage of 94.61%, 92.42%, 93.97% and K4 coverage of 87.75%, 87.89%, 93.42%. The lowest coverage of obstetric complications management is Freshwater Public Healths of 4 (3.27%) out of 122 estimates of pregnancy with complications (City Health Office of Padang, 2017).

From the description above, the authors are interested in conducting a study entitled "Relationship between Knowledge and Attitudes of Pregnant Women about Pregnancy Hazard Signs with compliance *Antenatal Care* (ANC)in Trimester III at the Padang Tawar City Health Center".

## METHODS

This research is a quantitative study with design *cross-sectional*. The samples of this study were pregnant women Trimester III and all members of the population who met the inclusion criteria and did not meet the exclusion criteria were taken as samples. Data collection involved 38 respondents in the Tawar Public Health Center working area and interviews were conducted using questionnaires. Data were analyzed by univariate, bivariate using *Chi-Square* (*p-value* ≤0.05)

## RESULTS

### Characteristics of Respondents

**Table 1. Distribution of Frequency Characteristics of Respondents in Work Areas of Freshwater Health Center**

| No. | Characteristics of Respondents | Frequency (n = 38) | (%) |
|---|---|---|---|
| **1.** | **Age** | | |
| | <20 years | 0 | 0 |
| | 20-35 years | 37 | 97.4 |
| | > 35 years | 1 | 2.6 |
| **2.** | **Parity** | | |
| | Nullipara | 15 | 39.5 |
| | Primipara | 11 | 28,9 |
| | Multipara | 12 | 31, 6 |
| **3.** | **Education** | | |
| | elementary | 0 | 0 |
| | Junior | 4 | 10.5 |
| | High School | 19 | 50.0 |
| | D-III / S1 | 15 | 39.5 |
| **4.** | **Occupation** | | |
| | Farmer / fisherman / Labor | 0 | 0 |
| | IRT | 22 | 57.9 |

| | | | |
|---|---|---|---|
| | Self | 4 | 10.5 |
| | Other... | 12 | 31.6 |
| **5.** | **Information and Counseling** | | |
| | ever | 18 | 47.4 |
| | never | 20 | 52.6 |

In table 1 shows that the majority of respondents were in the age group of 20-35 years is (97.4%). Viewed from the parity grouping, the respondents were more in the nullipara category (39.5%), the last education of the respondents was more distributed at the high school level (50%), the majority of respondents work as housewives (57.9%), and more than half the respondents never get information about the danger signs of pregnancy (52.6%).

**Univariate Analysis**
**ComplianceANC Visit**
**Table 2. Frequency Distribution Based on Compliance Visit ANCANC**

| ComplianceVisit | Frequency (n = 38) | (%) |
|---|---|---|
| Comply | 30 | 78.9 |
| Non-Compliant | 8 | 21.1 |
| **Total** | **38** | **100** |

In table 2 shows that the majority of respondents (78, 9%) were obedient in carrying out ANC visits.

**Knowledge**
**Table 3. Frequency Distribution of Knowledge Levels of Pregnant Women About Pregnancy Hazard Signs Maternal**

| Knowledge Level | Frequency (n = 38) | (%) |
|---|---|---|
| Good | 29 | 76.3 |
| Less | 9 | 23.7 |
| **Total** | **38** | **100** |

In table 3 shows that more than half (76.3% ) respondents have good knowledge.

**Attitude**
**Table 4. Frequency Distribution Based on the Attitudes of Pregnant Women About Pregnancy Signs Maternal**

| Attitude | Frequency (n = 38) | (%) |
|---|---|---|
| Positive | 26 | 68.4 |
| Negative | 12 | 31.6 |
| **Total** | **38** | **100** |

In table 4 shows that more than half (68.4%) respondents have a positive attitud

**Bivariate Analysis**
**Table 5. The relationship between Pregnant Women Knowledge of Pregnancy Hazard Signs with Compliance ANC Visit**

| Knowledge Level | Compliance | | | | *p-Value* |
|---|---|---|---|---|---|
| | Compliant | | Not Compliant | | |
| | f | % | f | % | |
| Good | 28 | 96.6 | 1 | 3.4 | |
| Less | 2 | 22.2 | 7 | 77.8 | 0,000 |
| **Total** | **30** | **78.9** | **8** | **21.1** | |

Based on table 5, it was found that the percentage of respondents who did not adhere to ANC visits was more in respondents with less knowledge level, namely 77.8%, compared with a good level of knowledge which was 3.4%. The results of statistical tests using the test *Chi-Square* obtained *p-value* <0.05 (*p*= 0,000) which means that there is a significant relationship between the knowledge of pregnant women about pregnancy danger signs and compliance with ANC visits at the Air Tawar Health Center in Padang in 2018.

**Table 6. The relationship between Attitudes of Pregnant Women and Compliance with ANC Visits**

| Respondents' Attitudes | Compliance | | | | *p-Value* |
|---|---|---|---|---|---|
| | Compliant | | Not Compliant | | |
| | f | % | f | % | |
| Positive | 23 | 88.5 | 3 | 11.5 | |
| Negative | 7 | 58.3 | 5 | 41.7 | 0.81 |
| **Total** | **30** | **78.9** | **8** | **21.1** | |

Based on table 6 it is found that the respondents are non-compliant more ANC visits were made to respondents who had a negative attitude of 41.7%, compared to a positive attitude of 11.5%. The results of statistical tests using the test *Chi-Square* obtained *p-value* > 0.05 (*p*= 0.81) which shows that there is no significant relationship between attitudes of pregnant women and compliance with ANC visits in Padang's Air Tawar Health Center 2018

## DISCUSSION

### Characteristics of Respondents

Respondents in this study were 38 trimesters III pregnant women in Freshwater Community Service Work Area. The majority of respondents were in the age group of 20-35 years (97.4%), meaning that the majority of respondents were in the age of healthy reproduction. Age can affect one's mindset. Mothers of productive age (20-35 years) can think rationally compared to mothers who are young or old. So that mothers of productive age have more motivation to check their pregnancies (Agus and Horiuchi, 2012).

The type of parity in this study is grouped into three, namely nullipara, primipara, and multipara. The results showed that respondents were more in the nullipara category (39.5%) than in the primipara and multipara categories. Mothers with high parity numbers are not too worried about their pregnancies anymore, thus reducing the number of visits, while mothers with the first pregnancy feel ANC is something new so that mothers have higher motivation in their implementation (Agus and Horiuchi, 2012).

The most recent education of respondents was distributed at the high school level (50%). The education level of a person can determine how much knowledge he has. Pregnant women who have education have more understanding of health problems that affect their attitudes towards their own pregnancies and fulfillment of nutrition during pregnancy (Notoadmodjo, 2012).

The work of the majority respondents is as housewives (57.9%). Pregnant women who work with high and dense activities prefer to improve their careers compared to their own health, making it difficult to comply with ANC visits compared to housewives who have more free time to be able to arrange and schedule ANC visits optimally (Salman, et al., 2012).

Information or counseling about pregnancy danger signs is grouped into two, namely, ever and never received information or counseling about the danger signs of pregnancy. The results showed that more than half of the respondents had never received information or counseling about the danger signs of pregnancy (52.6%). Counseling is interactive communication between health workers and their mothers and families to exchange information. The ease of someone to obtain information can help speed up someone to gain new knowledge (Notoadmodjo, 2010).

### Compliance with ANCVisits

Basedresearch conducted on 38 third trimester pregnant women was found that more respondents obeyed (78.9%) made ANC visits. The results of this study are in line with the research carried out

by Yanti and Ayu (2015) in the Sareal Bogor Land Area which states that more respondents who obey (65.4%) make ANC visits.
Compliance is defined as the behavior of pregnant women in conducting pregnancy check-ups where mothers are categorized as obedient when carrying out antenatal care on the schedule of visits recommended by midwives (Pratitis, 2014). According to Kozier (2010) adherence is individual behavior according to therapeutic and health recommendations.
The results of this study concluded that most respondents made ANC visits according to the standards set by the Ministry of Health, namely ≥ 4 visits, 1 visit in the first trimester, 1 visit in the second trimester and 2 visits in the third trimester.

**Knowledge**
Based on the research that has been done, the results show that of the 38 respondents studied, the percentage of respondents who have good knowledge is 76.3% and respondents who have less knowledge are 23.7%. This means that most respondents have good knowledge about the danger signs of pregnancy.
This research is in line with the research conducted by Hasanah (2017) in the Mergangsan Yogyakarta Health Center that most respondents have knowledge with a high category of 70.2%, knowledge with a moderate category which is 16.2% and knowledge in the low category is 13.5%. Likewise, with the research conducted by Yanti and Ayu (2015) in Bogor Tanah Sereal Region, respondents with good knowledge (59%) were more than respondents who had low knowledge (41%).
According to Notoatmodjo (2012), knowledge is the result of knowing and being formed after someone has sensed a particular object. This sensing occurs through the senses that humans have, namely vision, hearing, smell, taste and touch. Most human knowledge is obtained through the sense of hearing and vision. Knowledge is a very important domain for the formation of one's actions.
The high level of knowledge of respondents regarding the danger signs of pregnancy is influenced by the level of education, experience and sources of information not only obtained from health workers but also social media owned by the mother. In addition, for pregnant women who have insufficient knowledge due to a lack of understanding of mothers about normal nausea and vomiting during pregnancy (73.7%), due to nausea and vomiting (52.6%), fetal movements are first felt (57.9%) ), and how many times the normal fetal movement for 12 hours (84.2%) is normal. So to increase this knowledge needs to be given more education and understanding to pregnant women, especially about the danger signs of pregnancy.

## Attitude
Based on the research that has been done obtained results that of 38 respondents found more than half of the respondents had a positive attitude that is 68.4% while respondents who had a negative attitude as much as 31.6%. This is in line with the research conducted by Sumarni (2014) at Latambaga Health Center in Kolaka Regency, finding that more than half of the respondents had a positive attitude of 67.8% and a negative attitude of 32.2%. Furthermore, research by Marbun (2015) at Padang Bulan Health Center was as far as II Medan Selayang Subdistrict, that respondents who had a positive nature (79.4%) were more than respondents who had negative traits (20.6%).
Attitude is a reaction or response that is still closed from someone to a stimulus or object. Attitudes can be interpreted as a tendency to act with certain patterns and attitudes not necessarily manifest in the form of actions (Notoadmodjo, 2012).
Based on the results of the study, it was found that most respondents had a positive attitude compared to respondents who had negative attitudes. By looking at the results of the questionnaire in this study, there was still a negative attitude in the respondents because there were still some respondents who would only make ANC visits if there were complaints (5.3%), felt that pregnancy checks were unpleasant (7.9%), did pregnancy check up to the Public Health if the facilities are complete (57.9%), do not have a pregnancy check-up because they are too busy working and the distance is too far from the house (18.4%).

**Bivariate AnalysisMeasures**

**The relationship between Knowledge and Compliance with ANC The**

results of the bivariate analysis in this study showed that the percentage of respondents who did not comply with ANC visits was more prevalent in respondents with a lack of knowledge, 77.8%, compared to a good level of knowledge, 3, 4%. Based on the statistical test obtained *p-value*<0.05 (*p*= 0,000), meaning there is a significant relationship between the knowledge of pregnant women about the danger signs of pregnancy with compliance with ANC visits at the Air Tawar Health Center in Padang City in 2018.

This research is in line with research conducted by Mahadewi (2016) in Ciruas Health Center, Serang Regency, that there is a significant relationship between knowledge about pregnancy danger signs and compliance with ANC visits with *p value*= 0.028. Furthermore, in a study conducted by Hasanah (2017) in the Mergangsan Yogyakarta Public Health Center, the results (*p*= 0,000), meaning that there is a relationship between knowledge about the danger signs of third-trimester pregnancy and regular antenatal care. As well as research conducted by Yanti and Ayu (2015) in the Bogor Tanah Sereal Region, showed that there was also a significant relationship (p = 0,000) between the knowledge of pregnant women about the danger signs of pregnancy with compliance with ANC visits.

The results of this study are supported by the theory of Lawrence Green in Notoadmodjo (2014) stating that knowledge is part of predisposing factors that facilitate the occurrence of behavior in a person or society. Knowledge is needed as an initial motivation in fostering self-confidence so that it is said that knowledge is a stimulus to one's actions (Wawan and Dewi, 2010).

This study shows that knowledge factors have a relationship with adherence of pregnant women to ANC visits. The higher the level of knowledge of pregnant women about the danger signs of pregnancy, the higher the level of adherence to ANC visits and vice versa. Because knowledge is the initial motivation in growing one's confidence so that it can affect the actions of pregnant women to make ANC visits.

**The relationship between Attitudes and Compliance ANC Visits**

The results of the bivariate analysis showed that the percentage of respondents who did not adhere to ANC visits was more on respondents who had a negative attitude that was 41.7%, compared to a positive attitude of 11.5%. Based on statistical tests obtained *p-value*> 0.05 (*p*= 0.81), meaning that there is no relationship between the attitudes of pregnant women and compliance with ANC visits at the Air Tawar Health Center in Padang City in 2018.

This research is in line with the research conducted by Sumarni (2014 ) at Latambaga Health Center, Kolaka Regency, stated that there was no relationship (*p*= 0.062) between the attitude of pregnant women about the danger signs of pregnancy to ANC behavior. Because there are still respondents who apply bad ANC behavior but are positive, but the attitude is an important factor in determining decisions in an effort to improve maternal and child health so that maternal and child mortality can be prevented early. With a positive attitude, the mother can respond to or assess the importance of having an ANC visit during pregnancy.

In contrast to the research conducted by Kusumastuti (2015) in Sewon II, Public Health Center Bantul stated that there was a relationship (*p* = 0.028) between the attitude of pregnant women and the regularity of ANC visits. This is caused because in Kusumastuti's research there is a difference in the number of respondents who have positive and negative attitudes, namely 50%, which is influenced by the mother's lack of understanding and one of the factors that influence her is the mother's level of education have elementary education level. Whereas in this study the lowest education level was junior high school and had different frequency differences between positive and negative attitudes.

Thus, this confirms that differences in the attitude of respondents do not affect compliance with ANC visits, because attitude is a reaction or response that is still closed from someone to the stimulus given.

## CONCLUSION

1. More than half of the respondents were on average 20-35 years old, the most parity respondents were nullipara, the highest number of respondents was at the high school level, more than half of the respondents worked as housewives (IRT) and more than half of the respondents never received information or counseling about the danger signs of pregnancy.
2. More than half of the respondents have good knowledge about the danger signs of pregnancy.
3. More than half of the respondents have a positive attitude about the danger signs of pregnancy.
4. More than half of the respondents obeyed the visit *Antenatal Care*.
5. There was a significant relationship between the knowledge of pregnant women about the danger signs of pregnancy with the visitor visits *Antenatal Care* at the Air Tawar Health Center in Padang City in 2018.
6. There was no significant relationship between the attitudes of pregnant women about pregnancy danger signs and adherence visits *Antenatal Care* at the Tawar Air Health Center in Padang City in 2018.

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# The Association of Sources of Information and Social culture with the Immunization of *Measles Rubela* (MR) in Lubuk Buaya Primary Health Center Padang City.

**Rafika Oktova[1] Aldnina Ayunda Insani[2], Dyan Permata Rachim[3]**

[1] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[2] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[3] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
rafikaoktova@med.unand.ac.id[1]

**Abstract**

Measles Rubella (MR) immunization is a way to actively increase a person's immunity against antigens (measles and rubella viruses), so that if later exposed to similar antigens, measles and rubella infection will not occur. The purpose of this study was to determine the association of information and socio-cultural sources with the administration of Measles Rubella (MR) immunization in children aged 9 months to 5 years in the working area of Lubuk Buaya Health Center, Padang City.

This study was a quantitative study with cross sectional design conducted at Lubuk Buaya Primary Health Center from September 2019 to October 2019. There were 97 mothers with 9 month until 5 years childrens became sample of this study. The mother as the respondent was interviewed directly with a questionnaire. Data will analyzed in univariate and bivariate by using chi-square analysis ($p<0,1$).

The results showed the percentage of mothers who gave Measles Rubella (MR) in the Work Area of the Lubuk Buaya Public Health Center in Padang City was 59.8% while the percentage of mothers who did not give MR immunization was 40,%. The majority of respondents found good sources of information (29%) and good and poor socio-cultural information (43%). There is a relationship between the source of information ($p = 0.027$) and social culture ($p = 0.001$), with the administration of Measles Rubella (MR) immunization in the Work Area of the Lubuk Buaya Health Center in Padang City. From the results of the study it can be concluded that the better the source of information obtained by the mother, the higher the level of maternal participation in the administration of Measles Rubella immunization to children. The inclusion of MR immunization also depends on the mother's negative and positive socio-cultural exposure as well as on the mother's perception in the socio-cultural understanding itself.

There is a significant association between the source of information with the administration of Measles Rubella (MR) immunization. It is expected that mothers should administer Measles Rubella (MR) immunization by taking into account information and socio-cultural sources so as to prevent measles and rubella.

**Keywords** : Immunization MR, Resources, Socio-culture

## INTRODUCTION

Measles and Rubella is an infectious disease that is transmitted through the respiratory tract caused by measles and Rubella virus. Children and adults who have never been immunized against Measles and Rubella, or who have never experienced this disease would be at high risk of contractingThis virus (Ministry of Health, 2018). Measles can cause some complications, such as pneumonia (pneumonia), inflammation of the brain (encephalitis), blindness, malnutrition and even death (Ministry of Health, 2017) while rubella usually causes mild disease which often infect children and young adults who are vulnerable and if rubellainfected pregnant women in the first trimester or early pregnancy, may cause miscarriage or defects in babies born. The disability is often called Congenital Rubella Syndrome (CRS) baby such as heart and eye disorders, deafness and developmental delay (Ministry of Health, 2018).

The initial symptoms of measles usually appear 10-12 days after infection, include high fever, runny nose, red eyes, and small white spots inside the mouth. A few days later, a rash develops and appears on the face and upper neck and gradually spreading downwards (Pan American Health Organization, 2018) Symptoms of measles can be accompanied by a cough or runny nose and conjunctivitis, and can lead to death if there is a concomitant complications such as pneumonia, diarrhea, and meningitis (DG P2P, 2016). This is a potential disease outbreaks if the low immunization coverage and immunity group or herd immunity is not formed. When a person is exposed to measles, 90% of people who interact closely with the patient can be infected if they are not immune to measles. A person can be immune if immunized or infected with the measles virus (Ministry of Health, 2017) while rubella just cause symptoms of fever mild or even asymptomatic in children and in pregnant women trimester 1 may result in Congenital Rubella Syndrome (CRS) (Ministry of Health, 2018) but the incidence of CRS <1 case per 100,000 live births in 2010 (WHO, 2014).

In 2016, about 90,000 people died from measles (UNICEF, 2017) and in the state of European Union (EU) or European Economic Area (EEA) as many as 1,818 children under 5 years of exposure to the measles virus. In 2017 this event is increased to four times, with the number of 21 315 cases, while from 11 countries in 2017 there were 696 cases of rubella and occurs in children aged less than 5 years. Measles kills 72 children and adults in Europe in 2018. Cases of measles and rubella vaccine that causes most deaths in the EU and EEA countries is because parents do not vaccinate and bring their children to the hospital when their child falls ill. (European Center for Disease Prevention and Control, 2017) and more than 41,000 children and adults in the European Region have been infected with measles in the first 6 months of 2018 (WHO, 2018).

Indonesia is among 10 countries with the number of cases of measles and rubella world where there 88% of cases and 77% of cases of measles rubella (DG P2P, 2018). The Ministry of Health of the Republic of Indonesia recorded a number of cases of measles and rubella in Indonesia is very much within the last five years of which each year Iebih 11,000 suspected cases of measles, 12-39% of which is measles (lab confirmed), while 16-43% is rubella, In 2017 on the island of Java there were 4,084 positive measles and rubella by the number of measles cases as many as 2,535 cases 1,549 cases of measles and rubella. (Ministry of Health, 2018), while in 2018 in the province of Central Kalimantan found positive 670 3 including measles and rubella (Jawa Pos, 2018).

In 2018 in the province of West Sumatra city of Padang, a total of eight children infected with measles and rubella. Eight children all under the age of 15 years and most children become infected while still in the mother's womb trimester one. Based on the search conducted by a team of Health Department of Health Services Padang found that during pregnancy, mothers have started to show symptoms such as high fever and birth defects. Birth defects in four children caused by CRS suffer from hearing loss, cataracts, too late to talk to heart failure (Compass Padang, 2018).

Prevention of measles and rubella can be prevented by immunization. Routine measles and rubella vaccination for children is a public health strategy to reduce measles mortality. Measles vaccine has been used for over 50 years while the rubella vaccine has been used for more than 40 years. The rubella vaccine is available in monovalent preparations, or more commonly in combination preparations with other vaccines such as measles or measles vaccine (IDAI, 2016).

Nationally, the realization of vaccination has not reached 70%, while the target secure 95% of children immunized, to the Ministry of Health Indonesia with UNICEF cooperation in promoting immunization Measles Rubella (MR) to the general public in the form of campaign as one source of information that can be received by the mother and society. Forms campaign conducted by UNICEF's health ministry Public Service Announcements (PSAs) on TV and radio(Devi, 2018). Age of the children or infants under 5 years of age who are susceptible to the disease. This is caused by the immune system of infants not yet fully formed in other words, the immune system is still relatively weak so toddlers at high risk of contracting infectious diseases either from bacteria, viruses, fungi, and parasites. One way to increase your child's immunity to avoid the disease is by immunization given (Hand, 2011).

Health information is very important to maintain and improve the health of families where a mother who received information about the benefits, objectives, schedule and place of immunization

by itself the mother will understand the importance of immunization in children. Results 202 review articles pertaining to the reason of low immunization coverage, of 838 reasons, 58 of them (7%) were due to lack of information on immunization (Nurul, 2018). Based on the research of Bella that compliance with immunization MR highest (99%) of parents in Israel was most influenced by the resources, the level of their trust in sources of information, mainly in the nurses at the hospital showed that the source of information affects the mother in immunization in children (Elran, 2018).

Not only should get information, as social beings cultured, someone in the Social action will be influenced by local culture (Enda, 2010). Culture can underlie all human behavior as a culture is a human knowledge that is used to understand the environment, the community and the experiences that happened to him while in terms of the social could affect the participation of mothers to immunization, one of which is the image group while cultural factors that affect the mother in immunization such as the influence of tradition (Suparlan, 1982).

In the opinion of Marvin Harris, culture is a pattern of social behavior associated with the group, habit or way of life of a nation. In the event of disruption in equilibrium as the environmental changes that are physical, demographic, technology or other systems, then the culture will be affected mengikurti social change. Therefore Socially adaptive culture that affects a person in the act and make decisions (Umanailo, 2016) as a decision to immunize the second child onwards although the first child is not immunized.

Based on research Alshammari, majority of respondents (89.9%) know the recommended immunizations, encourage other parents to do the immunization, as well as the confidence and acceptance of the vaccine, vaccine-related perceptions of health benefits and ease of access to immunization, good enough impact on parents in Arabia Arabia is working to immunize her child (Alshammari, 2018) and in research Mechanic, explained that the underlying technical barriers to immunization MR is the influence of particular social and cultural about how seseoramg acquire and address information from sources they trust and do not trust, as well as the type of information that they consider credible and relevant to their situation (Mechanix, 2002)

The prevalence of immunization Measles Rubella (MR) in the province of West Sumatra in 2018 by 82% (DG, 2018) and a preliminary survey conducted by the researchers found that the prevalence of low MR imunsasi located in Lubuk Buaya Primary Health Center Padang City. It is based on data for 2018, which amounted to 36.3%. Interviews with 10 respondents showed that all respondents obtain sufficient information is by having a TV in the house and there are still actively using the radio. All respondents said never asked health workers associated immunization MR when visiting health care if their child is ill and all of the respondents also said that the environment around the indifferent with immunization MR sometimes affect each other in following immunization MR. 8 out of 10 mothers having many children as two people under the age of 5 years. From the interview, also found that in general, mothers do not regularly take the child to the Posyandu and she refused immunized sebahagian MR. From the above explanation, researchers are interested in studying the "social relations and cultural resources to immunization Measles Rubella (MR) in Lubuk Buaya Primary Health Center Padang City in 2019".

## METHOD

This study was a quantitative study with cross sectional design conducted at Lubuk Buaya Primary Health Center from September 2019 to October 2019. There were 97 mothers with 9 month until 5 years childrens became sample of this study. The mother as the respondent was interviewed directly with a questionnaire. Data will analyzed in univariate and bivariate by using chi-square analysis ($p<0,1$).

## RESULTS

### Univariate analysis

**Table 1.Distribution of immunization MR on child Ages 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City**

| Immunization MR | f | % |
|---|---|---|
| Not Immunization MR | 39 | 40,2 |
| Immunization MR | 58 | 59,8 |
| **total** | **97** | **100** |

From table 1 shows that the majority of mothers (59.8%) give to their children immunized MR.

**Table 2. Frequency Distribution of Resources in immunization MR on child Ages 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City**

| Resources | f | % |
|---|---|---|
| Not good | 27 | 27.8 |
| Pretty good | 20 | 20.6 |
| Well | 29 | 29.9 |
| Very good | 21 | 21.6 |
| **Total** | 97 | 100 |

From table 2 shows that the majority of respondents (29.9%) obtain resources both categories.

**Table 3. Socio-cultural Frequency Distribution in immunization MR on child Ages 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City**

| Socio-cultural | f | (%) |
|---|---|---|
| Not good | 42 | 43.3 |
| Pretty good | 3 | 3.1 |
| Well | 52 | 53.3 |
| **Total** | 97 | 100 |

From table 3 shows that the majority of respondents (43.3%) had a good social and cultural categories most of the others are not good.

### Bivariate analysis

**Table 4. of Information Relations with MR immunization in children aged 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City**

| Resour-ces | immunization MR | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Immuni-zation MR | | Not Immuni-zation MR | | | | |
| | f | % | f | % | f | % | |
| Not good | 10 | 37.1 | 17 | 62.9 | 27 | 100 | |
| Pretty good | 13 | 65.0 | 7 | 35.0 | 20 | 100 | |
| Well | 22 | 75.9 | 7 | 24.1 | 29 | 100 | 0,027 |
| Very good | 13 | 61.9 | 8 | 38.1 | 21 | 100 | |
| **Total** | 58 | 59.8 | 39 | 40.2 | 97 | 100 | |

Based on Table 4 shows that the percentage of mothers who give immunizations MR with good resources more than mothers who did immunization MR. Results of statistical test by using Chi-square test showed a significant correlation between the resources to immunization MR.

**Table 5. Socio-Cultural Relations with MR immunization in children aged 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City**

| Socio-cultu-ral | immunization MR | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Immuni-zation MR | | Not Immuni-zation MR | | | | |
| | f | % | f | % | f | % | |
| Not good | 40 | 95.2 | 2 | 4.8 | 42 | 100 | 0,001 |
| Pretty good | 1 | 33.3 | 2 | 66.7 | 3 | 100 | |
| Well | 17 | 40.5 | 35 | 59.5 | 52 | 100 | |
| **Total** | 58 | 59.8 | 39 | 40.2 | 97 | 100 | |

Based on Table 5shows that the percentage of mothers who give immunizations MR with unfavorable social culture more than mothers who did immunization MR. Results of statistical test by using Chi-square test showed a significant correlation between the resources to immunization MR.

## VI. DISCUSSION

### Immunization Measles Rubella (MR)

The percentage of immunization measles rubella (MR) in children aged 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City is equa59.8% children immunized MR and the percentage of children who are not immunized MR is equal 40.2%.This result is lower nationally in 2018 which amounted to 66.9% but higher than the percentage of MR immunization in Puskesmas Padang Lubuk Buaya in 2018 that is by 36.3% (MoH RI, 2018; Department of Health Padang , 2019). This is because the coverage of data collection on a national survey of immunization MR wider and retrieval of data on Riskesdas 2018 survey covers all regions in Indonesia, as well as spacious and monitoring immunization MR 2018 in Padang.

Results of this study was lower than the percentage found in the MR immunizationWest Papua Province, which reached 98% while the national coverage of immunization MR in 28 provinces outside of Java island only reaches 60.13%(MoH RI, 2018) and was lower if compared to the research conducted by Merlinta (2018) in Puskesmas Kartasura, Surakarta find MR immunization percentage of 70.5%, in line with research Kantohe, et al (2019 ) in women who have children aged 9 months to less than 15 years in the District Malalayang, Manado is 78.1%. In research Prabandari et al (2018) As much as 73% perform MR immunization with dominant reasons behind the mother in immunization MR namely because the information obtained good mother MR that immunization can prevent rubella and measles viruses for immunization is the obligation of the school.

MR immunization rejection due to poor knowledge of mothers (51.1%) of the MR and disease rubella immunization. This is because the MR immunization programs are still new and unfamiliar rubella disease for the mother. The emergence of negative publicity also affects the perception of women (52.2%) were either in the village of the District Gumpang Kartasura Sukoharjomengenai District immunization MR (Prabandari, 2018)

Based on the interview, as many as 72% of respondents do not have an understanding of what and how the importance of immunization MR, as much as 22% of respondents are less concerned about immunization MR, 57% of respondents lack the curiosity to immunization MR and 8% of respondents chose not to do MR immunization or did not come to posyandu or health centers for reasons of family trust.

The results of observations researchers also found that in the village of Lubuk Buaya Ganting Padang, 13% of respondents live in an environment that intimacy between each other or between

neighbors is very strong and affect the mindset of the individual. IHC Melati 5 was one posyandu located in the regions where the local communities have the same tribe, which means the area is environmentally senenek fathers and brothers as well as several other posyandu who remained in the neighborhood close kinship.

According to the Ministry of Health (2018) The degree of public health of a country is determined by several indicators. indicators that reflect the degree in Indonesia one of which is the death of the baby. Results Indonesian Demographic and Health Survey (IDHS) conducted by the Central Statistics Agency (BPS) showed an increase dansalah of the diseases included in the group PD3I are measles and rubella. Measles and rubella are accounted deaths each year mostly children under the age of five.

**Resources**

The results showed that the source of information obtained by mothers of children aged 9 months to 5 years the majority in both categories, namely by 29.9%. The results are consistent with research conducted by Irma Yulita (2018) in Puskesmas Kartasura, Surakarta which found that the MR received resources categorized as good mothers is 78.3% and there is a relationship between the women received information about the vaccine MR against participation interests vaccination MR in the working area of the health centers. The results of this study are also consistent with research conducted by Brother Anton (2014) in Puskesmas Selalong Sekadau Hilir Subdistrict Sekadau which found that immunization MR influenced by the source of the information obtained,

Based on data obtained from the respondents indicated that most respondents are getting information through electronic media is as much as 39.8% through health services as much as 27.13%, 14.95% and the print media is still some mothers did not get any information at all from three sources the information that is as much as 18.12%.

It can be caused because most mothers are 75.3% are housewives or do not work so the mother discount more time to explore and find information from the electronic media and from health services. While working mothers as much as 24.7% can receive resources from print and electronic media. So that the electronic media is one source of information for mothers who can improve a belief or argument in understanding the issue of immunization MR. The results of the interviews showed that mothers who do not work have more opportunity to explore information about MR immunization compared with working mothers.

It can also be caused by the mother's education level the majority have graduated from high school / equivalent 40.2% and graduates of PT / equal 21.6%. maternal education level determines whether or not a woman is easy to absorb and understand the information better.One cause of the mother does not provide immunization in children is the lack of the lack of someone to dig up information on immunization (Smith et al, 2017). Good source of information may affect participation in immunization MR mother to her child.

Age is the life spans measured by years, in which said early adult is 18-40 years, 41-60 years middle age and older adults above 60 years (Harlock, 2009). In this study showed that the majority of respondents as many as 79 respondents (81.4%) were in the category of early adulthood. According Huclok (1998) Henry (2010) is getting enough age, level of maturity and strength of a person will be more mature in thinking and action. In this case the crew mature mother always tried to gather information from various sources of information for understanding about something and influence in the child immunization MR.

Information media both print and electronic media continues to grow as a source of information and a need at any time. The public will know what he wanted to know and what he needed to know about immunizations MR. In addition, people can also interact with each other, and the messages can be well if the media made precisely to the target and useful information delivered to the creator and the target (Juddi, 2019). In the $21^{st}$century, when the information technology increasingly popular in the community, so that the electronic media and the internet generally become so popular yan where it can touch all levels of society anywhere without any specific limitation.

**Socio-cultural**

The results showed that most of the social culture are in good category that is equal to 43.3% and the majority again in the unfavorable category is 43.3%. The results can be seen from two different sides are equally strong, where social and cultural good is still attached to the culture imitative and attitude senosentrisme, the attitude more please view or like foreign products as well as one of the three cultural features that are geographically which in interaction with the environment, culture develops in a particular community and widespread, then the culture of the modern era and interact with each other fuse (Mubarak, 2009).

The results are consistent with research conducted Man (2017) in India, there is a high correlation between the socio-cultural context in influencing immunization that culture which prohibits immunization can not be continued in modern times because of the nature of imitative of society to something new so that tend to be taking part in bolstering confidence in the health workers and up to date. While sociocultural poor are not influenced by the attitudes of ethnocentrism, ie the tendency of each group to believe in a culture that already exists, so the mother in immunization MR on his son did not believe in the myth unclear origin such as culture reject their immunization (Mubarak, 2009).

In social life, can be seen clearly differences in the actions of each individual who is affected local sociocultural (Singh K.et al., 2012). Local culture shaping people's perception of risk or perceived vulnerability, people give value (positive or negative) to a problem based on their experience, and they trust the experts who have a cultural background similar to their own (Kahan et al., 2010) , Mothers who have experience fever effect felt by children and immunization illegitimate assumption, cultural or social Respondents with such beliefs tend to have a negative attitude towards immunization, so he did not immunize her child.

It can also be caused by the mother tribe that the majority (89.7%) ethnic Minang, where tribal culture minang in substance, there is rationality is a rational thought, critical, decisive, and not easy to accept new things for granted , Minang community tend to want to see concrete and tangible evidence and should assess in advance the new command in this case provide immunization MR on her, so then she can determine the right decision. In addition, the Minangkabau is a cultural or tribal habitual and uphold religious inseparable unity (Son, 2014) so that the influence of social environment on the issue of positive and negative about the immunization MR, the minang always assess in terms of religion and culture of their own.

Socio-cultural society divided into traditional and modern society or the present moment. Where that greatly affect traditional community action to immunize MR is the belief in the mythical ancestors so that someone who has a good social culture prefers to not give immunizations MR. Modern society who believe the myth that is now often referred to as "hoax", with a good social culture will affect the mother for not giving immunizations MR.

It can also be caused by the mother's education level the majority have graduated from high school / equivalent (40.2%) which include a high level of education level of secondary education. While the basic form of elementary education / equivalent and junior / equal (38.1%). The education level of the mother determines whether or not a woman is easy to absorb and understand the socio-cultural environment. Educated mothers tend to have properties mimicking basic, low work ethic, like to pretend (Mubarak, 2009). In this case when a group of immunizing MR environment, then the mother will also give immunizations MR and vice versa.

In interviews conducted by the researchers, there is also the experience factor that mendominan against immunization MR on their children, whether it is from experience itself, relatives near and far as well as the environment around Puskesmas Lubuk Buaya Padang that children who had been immunized MR up currently in good and healthy condition.

Extension of health on an ongoing basis about the importance of immunization MR in Lubuk Buaya Primary Health Center Padang City is also a supporting factor for the mothers prefer to give her child immunization MR. Counseling is done on the basis of lack of interest in providing immunization MR mother to her child is accompanied by MR immunization campaign program of the government as an effort to increase immunization MR in children aged 9 months to 15 months.

**Relations with immunization resources in Children Ages 9 months to 5 years.**

Results of statistical test by using Chi-Square test showed the value of p = 0.027 (p <0.1). Based on these results it can be concluded that there is a significant relationship between resources with MR immunization in children aged 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City.From the results of statistical tests Nurul Hidayah study (2017) which was obtained p value 0.000<0.1 means that there is a relationship between resources to immunization in Puskesmas Umban Sari Pekanbaru. This is also consistent with a study in which the results showed that there /was a significant association between immunization with information about the complete basic immunization, where the value of 0.04 p value <0.05 (Triana, 2015).

Information is a container in the shape of one's understanding. People exposed to a different understanding of the information by people who do not get the information (Hamid, 2011). In the study Elran et al (2018), that the biggest factor affecting immunization in children is the belief regarding the information received by the mother. A mother who is getting better information about the benefits and purpose and place of immunization schedules and then by itself it will understand the importance of immunization in children.

Electronic media such as social media as well as radio and television is the main source of information for the public. In a study conducted in Lubuk Buaya Primary Health Center Padang City, received information about the MR obtained from Whatsapp, Facebook, Youtube and television. According to research Prasanti (2017) that the search for health information used by the people is television, online media or credible website portal sites, and social media is sharing information from the group Whatsapp, LINE Group, and BBM Group.

The print media such as books, leaflets, posters, and print media were present continues to grow through creative ideas such as the calendar method is one source of information available to the public at Lubuk Buaya Primary Health Center Padang City. According to research Yulida (2018) that mothers get the information from the media about the health promotion MR vaccine has an interest to participate than mothers who do not get the information. This is in line with research by Smith et al (2017) that need improvement in obtaining information about the vaccine by the public.

Providers also a source of information for the community, midwives, medical personnel in hospitals and health centers. Skills needed by health personnel when giving continuous medical information and provide advice to families includes communicating clearly and regularly, listening to every question and concern for family members, as well as providing advice to the family members of any public health needs (Friedman, 2014). For that health workers have an important role in providing information about immunization MR. According to research conducted by Nolna et al (2018) that one of the problems that led to parents not to immunize is bad manners and lack of health personnel immunization of health workers.

**Socio-cultural relationship with childhood immunization at 9 months to 5 years.**

Results of statistical test by using Chi-Square test showed the value of p = 0.000 (p <0.1). Based on these results it can be concluded that there is a significant relationship between socio-cultural MR immunization in children aged 9 months to 5 years in Lubuk Buaya Primary Health Center Padang City.The results are consistent with international studies conducted Man (2017) in India that there is a high correlation between the culture in influencing child immunization. Based on international research Alshammari, majority of respondents (89.9%) know the recommended immunizations, encourage other parents to do the immunization, as well as the confidence and acceptance of the vaccine, vaccine-related perceptions of health benefits and ease of access to immunization, where it is a socio-cultural substance and impacts both parents in Saudi Arabia is working to immunize her child (Alshammari, 2018).

Cultural barriers related to the way of life and belief systems, differences in perception or point of view, the attitude of traditionalism prejudiced against new things, is problematic culture that affects the mother in immunization MR (Setiadi, 2013). In the study Mechanic explained that the underlying barriers to immunization MR is social influence certain culture of how people acquire and address information from sources they trust and do not trust, their own perspective as well as the type of information that they consider credible and relevant to their situation ( Mechanix, 2002).

The times promote a change in culture. Culture that trust by a group will inevitably shift In this case the rejection of immunization will be through the process of diffusion (spread of culture) that give rise to conflict between groups who want change with groups that do not want change. What is needed here is social control in the community, which became a "whip" for the group with the same culture so that they can sort out, where appropriate culture which is not appropriate. It can be concluded that the granting or refusal of immunization in children because culture is a common thing in the social environment (Setiadi, 2013).

Residents live in a social reality that they create collectively, the emergence of thought would be a renewal in society enabling socio-cultural changes. Positive social change to encourage people to think ahead so as to the formation of a good social and cultural life and vice versa. One example of an impact on the status of immunization MR in children aged 9 months to 15 years. The existence of a good social culture where people tertuntut to think forward, also will push to familiar immunization in the community.

## VII.CONCLUSION

Based on the results of research on "Social relations and cultural resources to immunization Measles Rubella (MR) in Puskesmas Padang Lubuk Buaya in 2019", it can be concluded as follows:

1. MR Immunization frequency distribution in Lubuk Buaya Primary Health Center Padang City including public health problem because not yet reached the minimum target of national immunization is 95%
2. The frequency distribution obtained resources immunizing mothers with MR in Lubuk Buaya Primary Health Center Padang City in 2019mostly include both categories. Better resources obtained by the mother the higher the mother's level of participation in the Measles Rubella immunization in children. Various sources of information obtained by the mother is out of print media, electronic media, and healthcare.
3. The frequency distribution of socio-cultural MR immunization in Puskesmas Padang Kota Lubuk Buaya mostly categorized as good and most of the other less well. Socio-cultural influence on participationMR mother in immunization depends on two different sides of the socio-cultural exposure that is positive or negative depending on the relevance of the social perception of the mother in the culture itself

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# The Relationship between Mother's Knowledge, Education and Occupation towards MR (*Measles Rubella)* Vaccine and The Status of MR (*Measles Rubella)* Vaccination on Toddler at the Work Area of Dadok Public Health Center, Tunggul Hitam, Padang City

**Firdawati[1], Bobby Indra Utama[2], Lindo Amelia Iskandar[3]**

[1] *Department of Public Health, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[2]*Departmen of Obstetrich and gynecology, RSUP DR M. Djamul, Faculty of Medicine, Padang, Indonesia*
[3] *Department of Obstetrich and gynecology,RSUP DR M.Djamil, Faculty of Medicine,Padang,Indonesia*
firdawati@med.unand.ac.id[1]

**Abstract**

Measles and rubella are two infectious diseases coming through respiratory tract caused by measeles and rubella virus. The MR (*Measles Rubella*) vaccine gives an advantage to protect the children from disablement and death. For the immunization scope in West Sumatera is categorized in the low level all over Indonesia. The aim of this research is to find out the relationship between mother's knowledge, education and occupation towards MR (*Measles Rubella*) vaccine and the status of MR vaccination at the work area of Dadok public health center, Tunggul Hitam, Padang City. This sectional cross research was conducted in Dadok district, Tunggul Hitam from January 2019 to May 2019. The samples of this research are mothers who are raising 9-year-old to 5-year-old toddlres as many as 67 mothers taken by using *multistage random sampling* technique. They were interviewed through questionnaires to know the level of their education, knowledge and occupation and the status of MR (*Measles Rubella*) vaccination on their toddlres. The result of this research shows 34,3% of the respondents vaccinized their toddlers with MR (*Measles Rubella*) vaccine. There is a relationship between mother's knowledge and the status of MR (*Measles Rubella*) vaccination (p=0,001), between mother's education and MR (*Measles Rubella*) vaccination (p=0,001) and there is no relationship between mother's occupation and MR (*Measles Rubella*) vaccination (p=0,242). From this research, there is a meaningful relationship between mother's knowledge and education and the status of MR (*Measles Rubella*) vaccination. It should have an improvement regarding the advantage of MR vaccine to prevent disablement and death.

**Keywords** : Measles and rubella

## INTRODUCTION

Measles and Rubella is an infectious disease that is transmitted through the respiratory tract caused by measles and Rubella virus. Children and adults who have never been immunized against Measles and Rubella, or who have never experienced this disease would be at high risk of contractingThis virus (Ministry of Health, 2018).

Measles and rubella are two infectious diseases coming through respiratory tract caused by measeles and rubella virus (IDAI, 2017). Measles is an infectious disease caused by *Morbillivirus*virus (Kutty, et.al. 2013). Measles is signed with some symptoms such as high fever, reddish spots (rash) as well as cough and cold, conjungtivity, if the sufferer got complication such as pneumonia, diarrhea and meningitis, it can be very dangerous even causes death (Ditjen P2P, 2017).

Rubella is one of health problems that has lots of clinical impacts and gives bad impact such morbility and mortality (Nazme, et.al. 2014). Rubella is a typical low disease that can infect children and adults and gives the bad impact if it happened to a pregnant mother

especially for the first trisemester of pregnancy which causes miscarriage and disablement so-called *Congenital Rubella Syndrom* (CRS) like deafness, visual disturbace, heart abnormalities and delay in brain development.

According to the data published by *World Health Organization* (WHO) in 2015, Indonesia is among the top 10 highest number of measles cases in the world. The suspected Measeles and rubella cases in Indonesia were reported between 2014 to July 2018 as many as 57.056 cases which were divided into 8.964 people suffered measeles positive abd 5.737 people suffered rubella positive (Kemenkes, 2017). Every year through surveillance event, reported more than 11.000 meseles suspected cases and the laboratory confirmed results showed 12,39% of the cases suffered measles (lap confirmed) meanwhile 16-43% suffered rubella.

Rubella is one of public health problems that needs a proper effective prevention. The data from surveillance in the past 5 years show that 70% of the rubella case suffered by the people aged <15. Besides, according to the study about the estimation of *Congenital Rubella Syndrom* (CRS) disease burden in Indonesia in 2013, estimated there are 2.767 CRS cases, 82/100.000 suffered by mothers aged 15 to 19 and decreasing to 47/100.000 suffered by mothers aged 40-44 (Depkes RI, 2017). In 205-2016, 13 sentinel hospitals with *Congenital Rubella Syndrom*e (CRS) reported that there were 226 CSR cases consist of 83 certain cases and 143 clinical cases. From 83 certain cases (*lab confirmed*), reported 77% of the patients suffering heart abnormality, 67,5% of the patients suffering cataract and 47% of the patients suffering the deafness (Ditjen P2Pnp j , 2017).

Measles and rubella give a bad impact to the children's health so that government launched MR vaccinatio (MMR VIS – Indonesia, 2012). MR vaccine can protect children from disablement and death as a result of pneumonia, diarrhea, brain damage, deafness, blindness and congenital heart disease (Ditjen P2P, 2017). Based on Indonesian target in giving MR (*Measles Rubella*) vaccine in West Sumatera until December 2018 as many as 41,61% (Dinkes Sumbar, 2018) and according to the data from Health Agency in Padang City, the vaccination scope of MR (*Measles Rubella*) is 51,4%. For the lowest scope is in Dadok Public Health Center Tunggul Hitam as many as 22,9% (Dinkes Kota Padang, 2018).

MR (*Measles Rubella*) vaccine is a live vaccine which is attenuated in the form of pollen and its solvent. MR vaccine is given to the toddlre aged 9 months until 15 months. (Ditjen P2P, 2017). There are some antivaccine groups that ignore the prevention aspect towards disease and prioritize curative aspect or

Giving vaccine is one of the efforts in preventing the Congenital Rubella Syndrome (CRS) disease. Mother is the one that takes an important role in fulfilling her children immunization needs. There are some factors that influence this action in fulfilling her children vaccination which is the knowledge. The knowledge about a good vaccinationwill improve her eagerness to vaccinize her child (Gehara at.al, 2015). A mother who has a higher knowledge tends to realize to fulfill her children immunization needs and pays attention to the precise time. Instead, a mother who has a lower knowledge about vaccination will find difficulty to determin what kind of immunization that will be given to her child and when the right time to do such thing Triana, 2016). An education for a mother is one of the processes to determine attitudes, the higher education that a mother gets, the better health service that a mother will determine. Otherwise, the lower an education that a mother gets, the worse health service that her children can get (Irawati, 2011). A mother's occupation becomes one of the factors to determine her children immunization status because a jobless mother has a bigger chance find out what the best thing her children can get than a full-time-job mother especially for mothers who work

outside the house cannot have any chance to go to the health service to do an immunization for her children (Machsun dan Susanti, 2018).

According to the explanation above, that is an interesting point to be examined regarding the relationship between mother's knowledge, education and occupation towards MR (*Measles Rubella*) vaccine and the status of MR (*Measles Rubella*) vaccination at the work are of Dadok Public Health Center, Tunggul Hitam, Padang City.

## METHODS

**This is a cross sectional research. The data were collected from January 2018 to June 2019. The populations of this research are all mothers who are raising toddlres aged 9 months to 5 years old** at the work are of Dadok Public Health Center, Tunggul Hitam, Padang City. The number of the samples in this research is 67 subjects. The data were taken by using ***multistage random sampling*** **and** ***simple random sampling*** techniques. Data were processed using ***chi-square*** **test (p<0,05) with software SPSS 17.**

## RESULTS

### Univariate Analisys

**Table 1. Respondent Characteristics**

| Characteristics | f (n=67) | % |
|---|---|---|
| Mother's Education | | |
| – Elementary (SD,SMP) | 34 | 50,7 |
| – Advanced(SMA, Undergraduate) | 33 | 49,3 |
| Mother's Occupation | | |
| – Unemployed | 27 | 40.3 |
| – Employed | 40 | 59.7 |
| Vaccination Status | | |
| – No | 44 | 65.7 |
| – Yes | 23 | 34.3 |

The results of this research showed the most education that mothers got is elementary (SD, SMP) as many as 34 people (50,7%), the mother's occupation status shows 40 mothers are working (59,7%) wile the status of vaccination the most children are not vaccinized as many as 44 people (65,7%).

**Table 2.The Distribution of Knowledge Frequency**

| Knowledge | f (n=67) | Percentage (%) |
|---|---|---|
| Not good | 26 | 38,8 |
| Good | 41 | 61,2 |
| **Total** | **67** | **100** |

According to the table 2, it shows the most mothers have good knowledge as many as 61,2% and mothers who have no good knowledge as many as 38,8%

**Bivariate Analisys**

**Table3. The Relationship between Mother's Knowledge and the Status of Toddler MR (*Measles Rubella*) Vaccination**

| Knowledge | Status Vaksinasi MR | | | | Total | | *p-value* | *Odds Ratio (OR)* |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | | |
| | f | % | f | % | f | % | | |
| Good | 21 | 51,2 | 20 | 48,8 | 41 | 100 | | |
| Not good | 2 | 7,7 | 24 | 92,3 | 26 | 100 | 0.001 | 12,600 |
| **Total** | 23 | 34,3 | 44 | 65,7 | 67 | 100 | | |

Table 3 shows a good knowledge influences the MR vaccination status on the toddler as many as 21 respondents and 24 respondents with not good knowledge to MR vaccination on their toddlers. The statistic test result using chi square tes resulted p-value 0,001. The value p <0,05 can be concluded that there is a significant relationship between mother's knowledge and MR vaccination status on toddler.

**Table 4. The Relationship between Mother's Education and the Status of MR Vaccination on Toddler**

| Education | The Status of MR Vaccination | | | | Total | | *p-value* | *Odds Ratio (OR)* |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | | |
| | f | % | f | % | f | % | | |
| High Education | 18 | 54,5 | 15 | 45,5 | 33 | 100 | | |
| Basic Education | 5 | 14,7 | 29 | 85,3 | 34 | 100 | 0,001 | 6,960 |
| **Total** | 23 | 34,3 | 44 | 65,7 | 67 | 100 | | |

Table 4 shows that high education influences the status of MR vaccination on toddler with number of respondents are 18 respondents and there are 29 respondents with basic education did not do MR vaccination on their children. The result of statistic test using chisquare test resulted p-value 0,001. The value p<0,05 can be concluded that there is a significant relationship between mother's education and the status of MR vaccination.

**Table 5. The Relationship between Mother's Occupation and the status of MR Vaccination on Toddler.**

| Occupation | Status Vaksinasi MR | | | | Total | | *p-value* | *Odds Ratio (OR)* |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | | |
| | f | % | f | % | f | % | | |
| Unemployed | 12 | 44,4 | 15 | 55,6 | 31 | 100 | 0,242 | ,474 |
| Employed | 11 | 27,5 | 29 | 72,5 | 36 | 100 | | |
| **Total** | 23 | 34,3 | 44 | 65,7 | 67 | 100 | | |

Table 5 shows that employed mothers influence the status of MR Vaccination on toddlers as many as 11 respondents and there are 15 respondents who are unemployed did not do MR vaccination on their toddlers. The statistic result using chisquare test resulted p-value 0,242). The value p >0,05 can be concluded that there is a significant relationship between mother's occupation and the status of MR vaccination.

## ANALYSIS

Education is a learning process that will make a change to be a better and a more mature person for family and society. Education later will influence knowledge of a person.

A person who has a higher education tends to easily absorb an information especially an information related to vaccination that is given by a health agent. Different education will influence a person to determine a decision. For a mother who has a higher education tends to be more open minded to accept new ideas comparing to those who have lower education so that later on information given will easily be accepted and be done (Rahmawati, 2013).

Occupation is an activity that can produce money for somebody. An employed mother can have a fewer leisure time so that she has no chance to bring her child to the health service coparing to unemployed mother. Besides, a mother who is busy with work especially those who works outside the house often forgets the vaccination needs of her children. As a result her children get improper vaccination (Mulyanti, 2013).

MR (*Measles Rubella*) vaccine consists of live measles and rubella tha have been attenuated. The seedling disease has an antigen that will be responded by the immunal system by creating antibody. The principal is that there is an antigen binding by antibody. The antigen that has been tied up by antibody will be eaten by mgrofag cell (Schwartz, 2015).

Education is the most important part to determine an attitude of a person. It influences a person to make a decision according to the research of an attitude that is based on a better knowledge comparing to the one which is based on unsatisfactory knowledge level (Notoatmodjo, 2014). The knowledge of a person about a disease can influence one's perception about it. Turns out, it influences an attitude of a person to reduce a threat of a disease (Azwar, 2013).

The result of this research shows there is a relationship between the level of mother's knowledge and the status of MR vaccination with p= 0,001. There are still mothers who did not do vaccination to their children even though they have good knowledge.

According to the interview results of some respondents, this happened because there is pro and contra in using MR vaccine regarding the composition of MR vaccine that is not pure or consists of pork's organ which is proscribed by Islam rules and also the period of time in giving MR vaccine can be said too long which is from 9 month old to 15 years old. As a result, mothers tend to avoid MR vaccine.

The result of this research is accordance with the research conducted by Merlinta that said the higher education of somebody, the bigger his interest to the MR vaccination, with value p = 0,016 (Merlinta, 2018), so is with the research conducted by Addina. She said that there is a relationship between the mother's knowledge and giving measles immunization with value *p-value* 0,001 (Addina, 2018). The relationship between the level of mother's education and the MR vaccination with value p=0.001 can be concluded that that relationship exists.

According to the result of this research, there are still mothers who did not give their children MR vaccine, eventhough they have got higher education because of their doubtfulness about the composition of MR vaccine that is circulating in social media related to pros and cons

in using MR vaccine. The postponement in giving MR vaccine to the children is supported by religion factor especially for Moslems. The majority of the populations at the work area in Dadok Public Health Center Tungglu Hitam are identified as Moslem.

Different from the research of Merlinta stated that there is no relationship between mother's education and the interest to do an MR vaccination at Kartasura Public Health Center with p = 0,262 (Merlinta, 2018). This research is also not accordance with the research conducted by Triana that stated that there is no relationship between mother's education and giving to do basic immunization to their children at Kartasura Public Health Center with p=0,34 (Triana, 2016).

According to statistic test, there is no relationship between occupation and the status of MR vaccination with p=0,242. It can be concluded that there is no asignificant relationship between mother's occupation and the status of MR vaccination on the toddler

The interview results from some respondents, even though mothers are working, they still have time to bring their children to the health service center. This is because they are mostly not working in formal institution like farmers, laborers and merchants. They are not tied up with a formal institution such as civil servants or private employees. They entrust their children to the health service center so their children get proper health service.

This research is accordance with the research of Desriyanta (2015) that stated that that there is no relationship between mother's occupation and the accuracy of the schedule in giving measles with value immunization to their children at Kartasura Public Health Center p=0,166 (Destiyanta, 2015). This research is not accordance with the research conducted by Nugroho that stated that there is a mother who works is at risk to have a child with unproper immunization status 2,68 higher rather than a mother who does not with *p-value* 0,04 (Nugroho, 2012).

## V.CONCLUSION

1. The most mothers living in work area of Dadok Public Health Center Tunggul Hitam Padang City have a better knowledge about MR vaccine
2. The most mothers living in work area of Dadok Public Health Center Tunggul Hitam Padang City have low education
3. The most mothers living in work area of Dadok Public Health Center Tunggul Hitam Padang City work in nonformal institution
4. The most mothers living in work area of Dadok Public Health Center Tunggul Hitam Padang City do not give MR vaccination to their children
5. There is a relationship between mother's knowledge and the status of MR (*Measles Rubella*) vaccination at work area of Dadok Public Health Center Tunggul Hitam Padang City
6. There is a relationship between mother's education and the status of MR (*Measles Rubella*) vaccination at work area of Dadok Public Health Center Tunggul Hitam Padang City
7. There is no a relationship between mother's occupation and the tatus of MR (*Measles Rubella*) vaccination at work area of Dadok Public Health Center Tunggul Hitam Padang City

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# FACTORS RELACTED TO COMPLIANCE WITH PREGANANT WOMEN IN IRON TABLET CONSUME IN WORK AREA OF PEMANCUNGAN HEALTH CENTER , PADANG CITY IN 2017

**Desmawati[1], Lusiana El Sinta Bustami[2], Eliska Yudia[3]**

*[1]Nutrition Departement of Medical FacultyUniversitas Andalas, Jln. Perintis Kemerdekaan no. 94, Jati,Padang City, Indonesia*
*2 Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, padang, Indonesia*
*3 Bachelor of Midwifery , Faculty of Medicine, Universitas Andalas, padang*
desmawati@med.unand.ac.id[1]

**Abstract**

Iron suplementation to pregnant woman is one of Indonesian's government and WHO program to prevent anemia. In Pemancungan Health Center there is an increasing of iron tablet suplementation but anemia prevalence among pregant woman also increasing from 2014 to 2015. It show the imbalance between the number of pregnant women who get iron with the incidence of anemia. This study aims to determine factors related to compliance pregnant women in iron consume in work area of Pemancungan Health Center Padang City in 2017

This study was cross sectional study. The study was conducted in Pemancungan Health Center Padang City in August 2017. Subject of this study was 40 pregnant women of second and third trimester. Data was collected by observation and questionnaire. Data analysis was performed using univariate and bivariate.

The results showed that 65% respondent was compliance consumption of iron tablets. Bivariate analysis show there is no significant association for age (p=0,602), parity (p=0,320) and education (p=1,000). There was a significant association between knowledge (p=0,0017), attitude (p=0,003), and family support (p= 0,001) with the compliance of iron tablet consumption in work area of Pemancungan Health Center Padang City in 2017.

There is an significant assocation between knowledge, attitude and family support with the compliance of iron tablet consumption. The importance of the role of health worker and family to support and educate pregnant woman about the importance of iron tablet consumption.

Keyword : Compliance, iron tablet, age, parity, education, occupation, knowledge, attitude, family support.

**Keywords** : Iron suplementation to pregnant

## INTRODUCTION

Maternal mortality is an indicator of public health status. Based on the Intercensal Population Survey (SUPAS) in 2015 the maternal mortality rate was 305 / 100,000 live births. One of the targets in Sustainable Development Goals (2014-2030) is to reduce the global maternal mortality rate to less than 70 / 100,000 live births(WHO, 2016). The increased maternal mortality phenomenon can be caused by various causes such as pregnancy and delivery complications such as bleeding, hypertension in pregnancy, infection, old partus and various other causes (Kemenkes RI, 2015: 118). The cause is closely related to the mother's nutritional status directly or indirectly.One of the causes of complications in pregnancy and childbirth is anemia that accounts for 55% of deaths in pregnant women (Arisman, 2010: 172).

The prevalence of iron deficiency anemia amounts to 2 billion of the world's population. As many as 350 million women suffer from anemia present in developing countries. The highest prevalence rates were in pregnant women (59%), non-pregnant women (41%) (Gibney et.al, 2009: 276). The prevalence of iron-deficiency anemia in Indonesia in pregnant women was 37.1% with prevalence among urban pregnant women (36.4%) and rural (37.8%) being similar. Iron deficiency anemia in pregnant women has the highest prevalence compared to prevalence of iron deficiency

anemia in children, toddlers, young women and women of reproductive age (15-49 years) (Kemenkes RI, 2013: 256). The number is approaching a severe public health problem with anemia prevalence limit of ≥40% (WHO, 2012:5). In 2014 the prevalence of maternal anemia in Padang City is 13.5% and in 2015 it is 10.6%. When compared to the prevalence of anemia in 2014 to 2015 did indeed decrease (Padang City Health Office, 2014, 2015 ).

In developing countries iron deficiency anemia is strongly associated with poor reproductive function, maternal deaths accounted for 10-20% mortality, low birth weight (<2.5 kg) and malnutrition in intrauterine. The effects of iron deficiency anemia are also seen in children, namely psychomotor development and poor intellectual ability of children (Gibney et al, 2009: 283). It also leads to increased risk of infection due to decreased endurance (Proverawati and Wati, 2011: 46). In order for nutritional adequacy in pregnant women to be balanced, the Ministry of Health Republic of Indonesia recommends to consume micro-substance that is needed by the body of iron, folic acid, calcium, iodine, and zinc (Kemenkes RI, 2014: 24).

The World Health Organization (WHO) recommends that to cope with the problem of increasing maternal mortality due primarily to anemia is to encourage pregnant women to take iron supplements every day during pregnancy (WHO, 2012: 4). In addition, the Indonesian government has also tried various ways, one of the government's efforts in the field of pregnant women's health services is giving iron tablets at pregnant women at least 90 tablets during pregnancy (Kemenkes RI, 2015: 105).

National coverage of iron tablets by 2014 is 85.17%, while in West Sumatra it is 79.16% (Kemenkes, 2015: 109). Based on Riskesdas in 2013 the number of pregnant women who consume iron tablets is 87.9% while those who do not consume 12.1%. Pregnant women who consume iron tablets for 90 days by 30.4%, less than 90 days by 34.8% and who forgot by 22.8%. From these data it can be concluded that the coverage of iron tablets consumption in pregnant women is not in accordance with government programs. Based on data Riskesdas year 2013 is not all pregnant women who complete the iron tablets for 90 days (Kemenkes RI, 2013: 256).

In the city of Padang the number of pregnant women who get iron tablets is different in various working areas of puskesmas. In the work area of Puskesmas Pemancungan , the number of pregnant women receiving iron tablets in 2015 was 99.07% Fe1 tablets and 99.86% Fe3 tablets. However, the prevalence of anemia increased from 8.1% in 2014 to 14.5% in 2015. Based on data from Padang City Health Office there was a mismatch between the number of pregnant women who received iron tablets with the incidence of anemia in pregnant women. (, Dinas Kesehatan Kota Padang, 2015)

Problems in the working area of Puskesmas Pemancungan can be influenced by the compliance of pregnant women in consuming less iron tablets. If pregnant women are obedient in taking iron tablets then it will increase hemoglobin level up to> 11gr% (Nirdayani, 2012). With the increased adherence of mothers taking iron tablets it will be able to reduce the incidence of iron deficiency anemia in pregnant women (Varney, 2006: 547).

Adherence of iron tablets is part of health behavior. The behavior of an individual's health is influenced by three main factors predisposing factors (age, parity, education, work, knowledge and attitudes toward health care), enabling factors (infrastructure or facilities), and reinforcing factors (support of her husband, family, community leaders) (Notoatmodjo, 2005: 60).

According to research Budiarni (2012) there is a relationship attitude of pregnant women with maternal obedience consume iron tablets. Based on research Hartati (2014) there is influence of education , knowledge and parity with compliance of pregnant women consume iron tablet. Mothers with higher education, good knowledge and parity ≤ 2 tend to be obedient in consuming iron tablets. According to Sadore et al's study (2015) there is a relationship of maternal age to maternal obedience taking iron tablets. The result is that mothers who are older (> 25 years) are 2.9 times more adherent in taking iron tablets compared to mothers <25 years of age.

According to research Sinaga (2014) there is influence of family support to obedience pregnant women consume iron tablet. The higher the support the family provides the higher the level of maternal obedience consume iron tablets. Based on the research Silvia (2012) there is a relationship of knowledge and work with maternal obedience consume iron tablets. Mothers with high knowledge

will tend to obediently consume iron tablets in the appeal of low-knowledge mothers and working moms will tend to obediently consume iron tablets compared to pregnant women who do not work.

Based on the description of the above problems, the researchers are interested to conduct research on "Factors related to maternity compliance consume iron tablets in the Working Area Puskesmas Pemancungan in Padang City in 2017.

## METHODS

This research is a quantitative research with *cross sectional* design , done in the working area of Puskesmas Pemancungan Padang City from November 2016 toDecember 2017. Population and research sample are all second and third trimester pregnant women as many as 40 people. Data collection by observation and questionnaire. Univariate and bivariate data analysis.

## RESULTS AND DISCUSSION

### Research result

### Univariate Analysis

### Characteristics of Respondents

**Table 1. Frequency Distribution of Respondent Characteristics in the Working Area of Puskesmas Pemancungan , Padang City Year 2017**

| No | Characteristics | Frequency (f) | Percentage (%) |
|---|---|---|---|
| 1. | Pregnancy Age | | |
| | -Trimester II | 20 | 50% |
| | -Trimester III | 20 | 50% |
| 2. | Education | | |
| | -SD | 9 | 22.5% |
| | -SMP | 7 | 17.5% |
| | -SMA | 20 | 50% |
| | -Academy / PT | 4 | 10% |
| 3. | Work | | |
| | -Housewife | 36 | 90% |
| | -Private employees | 1 | 2.5% |
| | - Civil servants | 2 | 5% |
| | - Others | 1 | 2.5% |

Based on t ab 1 above shows that the pregnancy age of respondents as much between trimester II and third trimester. Most respondent's education is SMA. The work most owned by respondents is housewives.

**Table 2 . Distribution of Age Frequency, Parity, Education, Employment, Knowledge, Attitude, Family Support and Compliance**

| Variables | Frequency (f = 40) | Percentage (%) |
|---|---|---|
| **Age** | | |
| - Not at risk | 36 | 90.0 |
| - At risk | 4 | 10.0 |
| **Parity** | | |
| - Primipara | 20 | 50.0 |
| - Multipara | 20 | 50.0 |
| **Education** | | |
| - High | 24 | 60.0 |
| - Low | 16 | 40.0 |
| **Work** | | |
| - Works | 4 | 10.0 |

| | | |
|---|---|---|
| - Not working | 36 | 90.0 |
| **Knowledge** | | |
| - Good | 23 | 57.5 |
| - Less | 17 | 42.5 |
| **Attitude** | | |
| - Positive | 20 | 50.0 |
| - Negative | 20 | 50.0 |
| **Family support** | | |
| - Supports | 22 | 55.0 |
| - Not Supporting | 18 | 45.0 |
| **Obedience** | | |
| - Obedience | 26 | 65.0 |
| - Not Compliant | 14 | 35.0 |
| **Total** | **40** | **100.0** |

Based on table 2 it can be concluded that the majority of respondents have a non-risk age (90.0%), high education (60.0%), non-work (90.0%), knowledgeable (57.5%), of the family to consume iron tablets (55.0%) and adhere to iron tablets (65.0%). Meanwhile, primitive and multipara respondents and respondents who have positive and negative attitudes also have the same number of many (50%).

**Table 3. Frequency Distribution Reasons Respondents Not Obedient in Consuming Iron Tablet in Working Area Puskesmas Pemancungan, Padang City Year 2017**

| No | Reason | Frequency (f = 17) | Percentage (%) |
|---|---|---|---|
| 1 | Do not want to take medicine | 1 | 5.8 |
| 2 | Lazy to drink every day | 4 | 23.5 |
| 3 | Nausea | 4 | 23.5 |
| 4 | Already eating tomatoes, vegetables and eggs | 1 | 5.8 |
| 5 | Forget | 3 | 17.6 |
| 6 | Black chapters | 3 | 17.6 |
| 7 | Headache | 1 | 5.8 |

Based on Table 3 of 40 respondents in this study, there were 17 respondents who stated the reasons for non-compliance in consuming iron tablets . The most frequent reason for the respondents was lazy to drink each day (23.5%) and nausea (23.5%).

**Bivariate Analysis**

**Table 4. Relationship Age, Parity, Education, Employment, Knowledge, Attitude and Family Support to Compliance With Preganant Women In Iron Tablet Consume In Work Area Of Pemancungan Health Center , Padang City In 2017**

| Variables | Obedience | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Obedient | | Not obey | | | | |
| | f | % | f | % | f | % | |
| **Age** | | | | | | | 0.602 |
| - Not at risk | 24 | 66.7 | 12 | 33.3 | 36 | 100 | |
| -Risk | 2 | 50 | 2 | 50 | 4 | 100 | |
| **Parity** | | | | | | | |
| -Primipara | 11 | 55.0 | 9 | 45.0 | 20 | 100 | 0.278 |
| -Multipara | 15 | 75.0 | 5 | 25.0 | 20 | 100 | |
| **Education** | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| -High | 16 | 66.7 | 8 | 33.3 | 24 | 100 | 1,000 |
| -Low | 10 | 62.5 | 6 | 37.5 | 16 | 100 | |
| **Work** | | | | | | | |
| -Work | 4 | 100 | 0 | 0.00 | 4 | 100 | 0.320 |
| -Does not work | 22 | 61.1 | 14 | 38.9 | 36 | 100 | |
| **Knowledge** | | | | | | | |
| - Good | 19 | 82.6 | 4 | 17.4 | 23 | 100 | 0.017 |
| - Less | 7 | 41.2 | 10 | 58.8 | 17 | 100 | |
| **Attitude** | | | | | | | |
| - Positive | 18 | 90.0 | 2 | 10.0 | 20 | 100 | 0.003 |
| - Negative | 8 | 40.0 | 12 | 60.0 | 20 | 100 | |
| **Family support** | | | | | | | |
| Support | 20 | 90.9 | 2 | 9.1 | 22 | 100 | 0.001 |
| - Not Supporting | 6 | 33.3 | 12 | 66.7 | 18 | 100 | |

Based on table 4 it can be concluded that there is a significant relationship between knowledge, attitude, and family support of pregnant women with adherence to consume iron tablets. There is no significant relationship between age, parity and education pregnant women with compliance consume iron tablets. Statistics on pregnant women's work can not be done, but pregnant women who work more obediently in taking iron tablets.

**Discussion**

**Univariate Analysis**

The results of this study showed that most of 26 people (65.0%) of 40 pregnant women in the working area of Puskesmas Pemancungan dutifully consume iron tablets . The reason the respondents did not adhere to the iron tablets was due to the side effects of iron tablets . Most of the respondents admitted to not taking iron tablets due to lazy drink each day (23.5%), nausea (23.5%). Furthermore, some resonden also reasoned forgot (17.6%) and black BAB (17.6%). The reason of the respondent was at least headache (5.8%) and the respondent claimed to have eaten tomatoes, vegetables, eggs so that respondents are lazy to consume iron tablets because they feel healthy even though they do not drink iron tablets anymore.

Based on table 2 most respondents belong to in the reproductive age of 20-35 years (90.0%). At the age of pregnant women 20-35 years there is the maturity of reproductive organs and mental to undergo pregnancy and childbirth. They will think more rationally and act well. It is also related to mother's nutritional status. Pregnant women at <20 years of age will easily experience mental shocks resulting in a lack of attention in meeting their nutritional needs (Wahyuddin, 2004).

The results of this study indicate that primiparous and multiparous pregnant women are the same (50.0%). Parity is an important factor in the incidence of maternal anemia. The more often a pregnant woman and childbirth, the higher the incidence of anemia due to the loss of iron (Manuaba, 2010).

This study shows pregnant women with higher education level (≥SMA) more that is 60,0%. A high level of education is concerned with understanding of health and pregnancy issues that affect attitudes toward pregnancy as well as in the fulfillment of nutrition during pregnancy (Priani, 2012).

The result of this research is unemployed pregnant woman that is equal to 90,0%. According to Anderson in Priyoto (2014), maternal work is one of the factors that influence the utilization of health services. Little maternal work may affect the health status of pregnant women.

In this study most pregnant women have good knowledge about iron tablets (57.5%). Knowledge is the accumulation of one's previous education and experience.The higher a person's education the higher the level of knowledge about something (Notoatmodjo, 2012)

The results found that pregnant women who had negative and positive attitudes were much the same (50.0%). Attitude is a closed reaction or response from a person to a stimulus or object involving emotional factors and opinions. Attitude can not be directly seen because attitude is not yet

an action. Attitude can not be seen but can be interpreted through a closed behavior . The attitudes and actions are closely related to the knowledge possessed by a person (Notoatmodjo, 2012).

The results of this study indicate the family of pregnant women who support in consuming iron tablets (55.0%).

**Bivariate Analysis**

**Relationship between Pregnant Women's Age and Compliance Eat Iron Tablet .**

The result of bivariate analysis showed that pregnant women who were obedient in consuming more iron tablets were higher in the non-risk age group (66.7%).This is due to a pregnant woman whose age is concerned and her concentration is more focused on her pregnancy and a pregnant mother at a mature age has a better experience of her health (Sadore, 2015). This is also in line with the concept that the readiness of pregnant women to follow antenatal care is related to changes that occur due to age and interaction with the background of experience (Rohmah, 2010) . There are differences in theories and outcomes with the needs of health services, that pregnant women should be in the risky age group (<20 and> 35 years) who should adhere to iron tablets. This is similar to that disclosed in the 2010 Basic Health Research data that the age group of pregnant women <20 years (too young) and> 35 years old (too old) who should need iron tablets but age groups are also not consuming much iron tablets.

Based on the statistical test, *p value* > 0,05 ( *p* = 0,602) means that there is no correlation between maternal age and compliance with iron tablet in Puskesmas Pemancungan, Padang 2017 . H al this may be due to lack of knowledge and lack of experience of women who are at-risk age group (<20 years) found that age are particularly vulnerable to health complications. While age at risk (> 35 years) is caused by lack of knowledge and also misperceived mother assumption related to experience. Some mothers argue that before they are> 35 years old they also do not consume iron tablets but pregnancy is in good condition. In addition, because of the wrong mother's assumption because in previous pregnancies they always drink iron tablets, so in pregnancy who are currently at age> 35 years they are reluctant to consume iron tablets back.

**Parity Relationships Pregnant Women with Compliance Eating Iron Tablet .**

Based on statistical test obtained *p value* > 0,05 ( *p* = 0,278), meaning there is no significant correlation between parity of pregnant mother with adherence to consume iron tablet in work area of Puskesmas Pemancungan, Padang City Year 2017. Result of bivariate analysis show that pregnant woman who adhered to the consumption of iron tablets more in the multiparous group of women (75.0%). This is in line with research conducted in India by Nivedita and Shantini (2016) that the more anemic are multipara pregnant women. Based on the theory that experience can be used as knowledge and improve ability, this is what may cause multiparous mothers can participate in their health in this case is to consume iron tablets (Rohmah, 2010).

Based on the theory, if connected with the results of this study and assessed from the aspect of the need is appropriate, where multiparous pregnant women more obedient in taking iron tablets than primiparous mothers. Here is a mother's awareness of his health. It is also possible that the pregnant mother learned from previous experience about her pregnancy.

**Relationship Education Pregnant Women with Compliance Eating Iron Tablet .**

Based on statistical test obtained *p value* > 0,05 ( *p* = 1,000), meaning there is no significant correlation between education of pregnant mother with compliance to consume iron tablet in Working Area of Puskesmas Pemancungan, Padang City Year 2017. This is because in working area of Puskesmas The slashing percentage of obedient pregnant women in taking iron tablets did not differ greatly between well-educated mothers (66.7%) and low-educated mothers (62.5%). This means that there is an equal opportunity between a highly educated mother and a lowly educated mother to obey in taking iron tablets. In addition, there may be other factors that affect adherence of pregnant women in taking iron tablets .

The result of bivariate analysis showed that pregnant women who were obedient in consuming irontablets were more in high educated pregnant women (≥SMA) of 66.7%. This is

consistent with the theory that education is one of the factors that support patient compliance (Niven, 2002). There is a contribution of education in the knowledge terh ad ap health behavior change. In addition, according to Arisman (2009) that low-educated pregnant women are generally never familiar with iron tablets during pregnancy.

**Working Relationships of Pregnant Women with Compliance Eating Iron Tablets .**

The results of this study shows that the percentage of obedient pregnant women in consuming iron tablets more in working mother is 100%. This study can not be tested statistically because of the proportion of pregnant women who work and disobey in iron tablets consumption (0.0%).

The work is closely related to the economic status of ib u which refers to income. It is also supported by the statement that in pregnant women who work and have better economies, they will be easy to access information about the health of various media. So that working mothers will be more concerned about health and pregnancy that will affect the change in health status (Buana, 2004).

Based on the theory, in this study more mothers who do not work than working mothers. So the mother who has income is also a little. They only accept from the husband alone. It can be said that the respondents in this study have the middle to lower economy, so this will also impact on the health of respondents.

According to the researchers' assumptions, both working mothers and unemployed have the same opportunities to adhere to iron tablets. In this case what is needed is the role of health personnel to be more active and active in disseminating information and promoting the importance of taking iron tablets during pregnancy either in working mothers or unemployed mothers.

**Knowledge of Pregnant Women with Compliance Consuming Iron Tablet**

The results of bivariate analysis showed that the majority of pregnant women were well-informed, adherent in consuming iron tablets (82.6%). Based on statistical test obtained *p value* <0,05 ( $p = 0,017$), meaning there is relation of knowledge with obedience of pregnant mother in consuming iron tablet.

Knowledge is related to compliance **.** The presence of knowledge relation with maternal obedience consume iron tablets because well-informed mother will have good perception also on prevention and treatment of anemia during pregnancy. This is evident from maternal obedient behavior in taking iron tablets during pregnancy (Sadore et al, 2015).

In this study respondents who answered correctly about the amount of iron tablets that should be consumed during pregnancy (27.5%). Respondents only received any amount of iron tablets provided by health workers, without knowing the amount that should be consumed. In addition, most respondents also did not know when iron tablets should be consumed (27.5%) and side effects from consuming iron tablets (45%) .

D require the role of health workers to provide and disseminate information to pregnant women about iron tablets either the amount, a good time to consume iron tablets , the effect of g sampin to consume iron tablets. This can be done by providing pregnant women with an intake about the importance of taking iron tablets. In accordance with Niven's (2002) assertion that patient compliance is supported by the interaction between the patient and the health worker, so that the patient does not speculate with his or her health and obtain clear information .

**Relationship Attitude of Pregnant Women with Compliance Eating Iron Tablet**

The result of bivariate analysis showed that the respondents who were obedient in consuming iron tablets were respondents who had positive attitude toward consuming iron tablets by 90.0%. Based on statistical test using *chi square* obtained *p value* <0,05 ( $p = 0,003$), which means there is significant correlation between attitude of pregnant mother with compliance to consume iron tablet.

The results of this study are in line with the theory of Niven (2002) that the patient's personality can be seen from the patient's attitude can support the adherence of patients undergoing treatment. In addition, one's attitude can also arise from his belief in something. Trust can arise from

the more often a person receives information (Notoatmodjo, 2005). A good attitude can arise when supported by a good understanding of something.

From 20 respondents there are 12 people who are not obedient in taking iron tablets and 2 people who have a positive attitude is also not obedient in taking iron tablets. This may be due to a lack of patient confidence in the therapy given. Respondents argue that drinking or not taking iron tablets, they can still live a healthy life without complaints. In addition, respondents also assume that although drinking iron tablets, there are still affected by anemia, without thinking of other causal factors.The opinion of the respondent is based on the observation and vision of the respondent to each other. Also seen from the answers of respondents questionnaire that 75.0% of respondents answered agree to no longer consume iron tablets because it was feeling healthy.

Based on this it can be concluded that the respondents assume less effective and less important iron tablets during pregnancy. In addition, it may be because the dose of iron tablets consumed every day and side effects will also cause reluctance of the mother to obey in taking iron tablets. This is evident from the results of research that the reason most mothers to not consume iron tablets are lazy to drink every day (23.5%) and nausea (23.5%).

From the results of this study required action from health personnel to motivate and attempt to convince respondents in consuming iron tablets. Research conducted by Ibrahim et al (2014) in Libya said that knowledge will affect a person to be positive or negative. If the respondent already has a good knowledge will be accompanied also with a positive attitude to iron tablets.

**Relation ofPregnant Women's Family Support with Compliance Consuming Iron Tablet.**

Based on bivariate analysis showed that pregnant women who obediently in taking iron tablets are pregnant women who get support from their family (90.0%).Based on statistical test using *chi square* obtained *p value* <0,05 ( $p =$ 0,001), meaning that there is significant relation between family support of pregnant mother with compliance to consume iron tablet.

The results of this study are in accordance with Lawrence Green's theory in Notoatmodjo (2012) that family support is a reinforcing factor in health behavior. In addition, according to Niven (2002) that non-compliance is influenced by the support provided by his family.

In this study the majority of respondents who are supported by his family obedient in taking iron tablets. Families can be supporters for their family members and consider that supportive families are ready to provide help (Muhith and Siyoto, 2016).

The majority in this study respondents were allowed by her husband to consume iron tablets. In line with the results of this study, according to Setyobudiono et al (2016) that pregnant women will tend to do what is supported and instructed by her husband. If the family of pregnant women have sufficient knowledge about iron tablets it will be easy for families to provide explanations and support pregnant women in taking iron tablets.

## CONCLUSION

1. There is no significant association between age, parity and education with the compliance of iron consumption
2. There is a significant association betweenmother's knowledge, mother's attitude, family support with the compliance of iron consumption
3. More pregnant women are work compliance in consuming iron tablets .


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# FACTORS ASSOCIATED WITH ANTENATAL CARE VISITS AT DISTRICT OF SUNGAYANG HEALTH CENTER, TANAH DATAR REGENCY IN 2017

**Abdiana[1], Elsa Gebri Utami[2]**

*[1]Departmen of Public Health, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
*[2]Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*

abdiana_epid08@yahoo.com[1]

**Abstract**

Antenatal care visits isa behavioral form in the utilization of health services to monitor pregnancy in purpose of improving maternal and fetal health. At public health center of Sungayang, the visit for K1 and K4 did not reach the target for the past three years. In 2016 the coverage for K1 was 70,6% dan K4 47,8% meanwhile the public health center target coverage for K1 is 97% and K4 95%. This demonstrate the lack of expectant mothers who make antenatal care visits in accordance with the standards

This study was a quantitative study with cross sectional design conducted at district of Sungayang health center from November 2016 – September 2017. Population and sample of this research is all of the third trimester pregnant women which amounted to 41 women. Data collected by observation and questionnaire. Data analysis was performed using univariate and bivariate.

The results showed 68.3% of pregnant women do antenatal care visits according to the standard. The result of bivariate analysis shows that there is no correlation between age (p = 1,000) and job (p = 0,077), there is correlation between education (p = 0,017), attitude (p = 0,014), and support of husband (p = 0,034) with antenatal care visits at district of Sungayang health center in 2017.

There is an associationbetween education,attitude, and support of the husband with antenatal care visits and there is a tendency correlation between knowledge with antenatal care visits

**Keywords** : Antenatal care visits, Age, Education, Job, Knowledge, Attitude, Support of the husband

## INTRODUCTION

MMR (Maternal Mortality Rate) is a sensitive indicator in describing the welfare of people of a country and also to the quality and accessibility of health care facilities (Kemenkes RI, 2015). The World Health Organization (WHO) estimates the 830 women died each day from complications of pregnancy and childbirth. Approximately 99% of all maternal deaths occur in developing countries. The ratio of maternal mortality in developing countries in 2015 is 239 per 100,000 live births compared to 12 per 100,000 live births in developed countries. By the end of 2015, approximately 303,000 women died during and after pregnancy and childbirth. Meanwhile, 2.7 million babies die during the first 28 days of life and 2.6 million babies are born dead. Nearly all the deaths occurred because of the things that can be prevented (WHO, 2016).

One of the targets in the Sustainable Development Goals (SDG's 2016-2030) about health at the third points i.e. guarantee healthy life and encourage prosperity for everyone at any age is to reduce maternal mortality globally to less than 70 per 100,000 live births, with no country which has a maternal mortality more than twice the global average (WHO, 2016). Based on the results of the SUPAS 2015 in Indonesia's health profile in 2015, MMR in Indonesia was 305 maternal deaths per 100,000 live births, the number is certainly still far above the target of SDG's.

Ensuring that every mother is able to access high-quality health services is an effort that could accelerate the decline of MMR. In terms of health care of pregnant women can be realized through antenatal services granting at least four times during their pregnancy, with the distribution of the time at least one time in the first trimester, second trimester at one time, two times on the the third trimester. The service time is recommended to ensure the protection for pregnant women and the fetus in the form of early detection of risk factors, prevention, and treatment of complications of early pregnancy (Kemenkes RI, 2015).

The high maternal mortality in Indonesia is related to the low attainment of implementation of Antenatal Care (ANC). Antenatal Care (ANC) is a service provided by health workers to the mother during her pregnancy and carried out in accordance with the standards set out in the Standards of midwifery/SPK (Community Development Directorate of maternal health, Kemkes, RI 2010 Riskesdas Results in 2013). The purpose of ANC is to monitor the progress of pregnancy in improving maternal health and fetal development (Siwi, 2014).

Assessment of the implementation of health service for pregnant women (ANC) can be done by looking at the scope of K1 and K4. The scope of K1 is the number of pregnant women who have obtained the first antenatal services by health workers compared to the number of target pregnant women in a working area in the span of one year. While the coverage of K4 is the number of pregnant women who have obtained the appropriate antenatal service standard with at least four times on the schedule that is recommended compared to the target number of pregnant women in one work area over a period of one year (Kemenkes RI, 2016).

In the year 2014, the K1 coverage in Indonesia was 94.99%, while for K4 coverage was 86.70%. For coverage of K4, seems still did not reach the target strategic plan (Renstra) Ministry of health healthcoverage for K4 which is 95% and there were only two provinces that reach the target that is North Sulawesi and Jakarta (Kemenkes RI, 2015) in 2015, health service coverage for pregnant women K1 was 95.75% and K4 coverage was 87.48%. The number meets the target for strategic plan (Renstra) Ministry of health in 2015 for K4 coverage which is 72%. However, this target is lower than the target in 2014 Renstra which is 95%. However, although the Renstra targets is lowered there still five provinces that have not yet reached the target, Papua, West Papua, East Nusa Tenggara, Maluku, and Central Sulawesi (Kemenkes RI, 2016).

Indonesia's Health Profilein 2015, in West Sumatra K4 coverage was 79.19%, although the K4 coverage has passed the targets for 2015 Renstra (72%) but the number has decreased from the previous year, which is 82.70% (Kemenkes RI, 2016). Then, in the Tanah Datar Regency, in 2013 recorded coverage of K4 65.26% and debuted two lowest (Kemenkes RI, 2013). In the year 2014, the 94% coverage K1 and K4 coverage 83% it is still listed under target that is 99% and 89% (Dinkes Sumbar, 2015). in 2015 the coverage for (K4) had decline from the previous year, which is 72.40% (BPS Kab. Tanah Datar 2016).

Sungayang is one of the 14 subdistricts in the Tanah Datar Regency which is the Top 3 lowest K4 coverage. In Sungayang there is a clinic where the target scope of K1 and K4 is 97% and 95%, but the achievement of year 2015 is 80.77% and 59.3% for K1 and K4. This has decreased from the previous year (2014), with coverage 94.2% K1 and K4 coverage was 68.8%. In the year 2016 K1 and K4 coverage in Sungayang also decline to 70.6% for K1 coverage and 47.8% for K4. This is certainly an issue for the clinics in Sungayang, because in the last three years the coverage for the K1 and K4 always decline, more over if we see from the geographical conditions and access to health services in district Sungayang we can say it's has good access and pregnant mothers should have been better in antenatal care visits in that area.

Antenatal visit for pregnancy (antenatal care) is a form of behavior in the utilization of health services. According to Lawrence Green in Notoatmodjo (2005) health behaviour of individuals affected by three main factors, predisposing factors,enabling factors,and reinforcing factors. Presdisposisi factors related to the characteristics of individuals that include age, education, employment, culture, knowledge, attitudes, and confidence in the health service. Enabling factors include factors that enable or facilitate conduct or action, include infrastructure or facilities for the occurrence of health behavior, such as health centers, Posyandu, Midwife Clinic etc. The factors that encourage or reinforce the occurrence of behaviors, such as support of the husband, the family, the community leaders (Notoatmodjo, 2005).

The expected goal is to find out factors associated with antenatal care visits at district of Sungayang health center, Tanah Datar Regency in 2017.

## RESEARCH METHODS

This study was a quantitative study with cross sectional design conducted at district of Sungayang health center from November 2016 – September 2017. Population and sample of this research is all of the third trimester pregnant women which amounted to 41 women. Data collected by observation and questionnaire. Data analysis was performed using univariate and bivariate

.

## RESULTS and DISCUSSION

This study conducted from November 2016-September 2017, performed in the region of clinics Sungayang Tanah Datar Regency. The samples were 41 respondents they were three trimester pregnant mothers.

### Research Limitations

There are several limitations of this study, which are: the variables examined, only limited to age, education, employment, knowledge, attitude, and support her husband, due to some considerations and the limitations. data collection by using questionnaire was subjective, so the information we got depends on the honesty of pregnant women at the time of answering questions and statements filed.

## RESULTS

### Univariate Analysis

### Characteristics Of Respondents

**Table 1. The Average Gestational Age of Third Trimester Pregnant Women inSungayang Health Center, Tanah Datar Regency in 2017**

| Variables | Mean | SD | Minimum-Maximum | 95% CI |
|---|---|---|---|---|
| Gestasional age | 34,80 | ±2,32 | 32-39 | 34,07-35,54 |

Based on table 1 above, the analysis results obtained average maternal gestational age was 34.80 weeks (95% CI: 34.0 – 35.54), with a standard deviation of ± 2.32 weeks. The youngest is 32 weeks gestational age and the oldest pregnancy is 39 weeks.

**Table 2. Distribution of Frequency of Antenatal Care Visits at District of Sungayang Health Center, Tanah Datar Regency in 2017**

| Antenatal Care Visits | Frequency (n=41) | Percentage (%) |
|---|---|---|
| Not according standard | 13 | 31,7 |
| According to the standard | 28 | 68,3 |
| **Total** | **41** | **100,0** |

Based on table 2 above it can be seen that out of 41 respondents, the majority of respondents do antenatal care visits according to the standard 68.3%.

**Bivariate analysis**

**Table 3. The Association of Age of Pregnant Women with Antenatal Care Visits at District of Sungayang Health Center, Tanah Datar Regency in 2017**

| Age | Antenatal Care Visits | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Not according standard | | According to the standard | | | | | |
| | f | % | f | % | f | % | | |
| Risk | 1 | 33,3 | 2 | 66,7 | 3 | 100 | 1,083 | |
| Not at risk | 12 | 31,6 | 26 | 68,4 | 38 | 100 | (0,089- | 1,000 |
| **Total** | **13** | **31,7** | **28** | **68,3** | **41** | **100** | 13,145) | |

Based on table 3 above, it shows that pregnant women with antenatal care visits according to standard is more for unrisk woman (68.4%), compared to a risk age woman (66.7%). Based on statistical tests p value = 1.000 (p > 0.05), it means there is no correlation between age of pregnant women with antenatal care visits at District Of Sungayang Health Center, Tanah Datar Regency in 2017.

**Table 4. The Association Education of Pregnant Women with Antenatal Care Visits at District of Sungayang Health Center, Tanah Datar Regency in 2017**

| Education | Antenatal Care Visits | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Not according standard | | According to the standard | | | | | |
| | f | % | f | % | f | % | | |
| Low | 8 | 57,1 | 6 | 42,9 | 13 | 100 | 5,867 (1,395-24,673) | 0,017 |
| High | 5 | 18,5 | 22 | 81,5 | 28 | 100 | | |
| **Total** | **13** | **31,7** | **28** | **68,3** | **41** | **100** | | |

Based on the table 4 above, its shows that pregnant women with antenatal care visits according to standard is more on mothers with higher education (81.5%) compared to mother with low education (42.9)%. Based on statistical tests p value = 0.017 (p < 0.05), it means there is a significant association between the education of pregnant women with antenatal care visits at District of Sungayang Health Center, Tanah Datar Regency in 2017.

**Table 5. The Association of Job of Pregnant Women with Antenatal Care Visits at District of Sungayang Health Center, Tanah Datar Regency in 2017**

| Job | Antenatal Care Visits | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Not according standard | | According to the standard | | | | | |
| | f | % | f | % | f | % | | |
| Working | 1 | 14,3 | 6 | 85,7 | 7 | 100 | 0,269 (0,029-2,497) | 0,389 |
| Not working | 13 | 38,2 | 21 | 61,8 | 34 | 100 | | |
| **Total** | **14** | **34,1** | **27** | **65,9** | **41** | **100** | | |

Based on the table 5 above shows that the percentage of pregnant women antenatal care visits that don't based on standard is more for unemployee mothers (38.2%) compared to employee mothers (14.3%). Based on statistical tests p value = 0.389 (p > 0.05), it means there is no association between the job of pregnant women with antenatal care visits at District of Sungayang Health Center, Tanah Datar Regency in 2017.

**Table 6. The Association of Knowledge of Pregnant Women with Antenatal Care Visits at District of Sungayang Health Center, Tanah Datar Regency in 2017**

| Knowledge | Antenatal Care Visits | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Not according standard | | According to the standard | | | | |
| | f | % | f | % | f | % | |
| Less | 13 | 39,4 | 20 | 60,6 | 33 | 100 | 0,040 |
| Good | 0 | 0 | 8 | 100 | 8 | 100 | |
| **Total** | **13** | **34,9** | **28** | **68,3** | **41** | **100** | |

Based on table 6 above shows that the percentage of pregnant women with antenatal care visits based on standard more on pregnant women with good knowledge (100%) compared to pregnant women with less good knowledge (60.6%). These results could not be tested, but there is a tendency of all pregnant women with good knowledge do antenatal care visits at District of Sungayang Health Center, Tanah Datar Regency in 2017.

**Table 7. The Association of Attitude of Pregnant Women with Antenatal Care Visits at District of Sungayang Health Center, Tanah Datar Regency in 2017**

| Attitude | Antenatal Care Visits | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Not according standard | | According to the standard | | | | | |
| | f | % | f | % | F | % | | |
| Negative | 12 | 46,2 | 14 | 53,8 | 25 | 100 | 12,000 (1,370-105,135) | 0,014 |
| Positive | 1 | 6,7 | 14 | 93,3 | 16 | 100 | | |
| **Total** | **13** | **31,7** | **28** | **68,3** | **41** | **100** | | |

Based on table 7 above shows pregnant women with antenatal care visits that standard more on mother with a positive attitude (93.3%) versus mother with mothers with negative attitude (53.8%). Based on statistical tests obtained p value = 0.014 (p < 0.05), it means there is a significant

association between attitude of pregnant women with antenatal care visits at District of Sungayang Health Center, Tanah Datar Regency in 2017.

**Table 8.The Association of Support of the Husband of Pregnant Women with Antenatal Care Visits at District of Sungayang Health Center, Tanah Datar Regency in 2017**

| Support of the Husband | Antenatal Care Visits | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Not according standard | | According to the standard | | | | | |
| | f | % | F | % | f | % | | |
| Don't support | 10 | 50,0 | 10 | 50,0 | 20 | 100 | 6,000 | |
| Support | 3 | 14,3 | 18 | 85,7 | 21 | 100 | (1,333- | 0,034 |
| **Total** | **13** | **31,7** | **28** | **68,3** | **41** | **100** | 26,999) | |

Based on table 8 above, it shows pregnant women with antenatal care visits based on standard is more on mom with a supportive husband (85.7%) compared to mother with a husband that doesn't support her (50.0%). Based on statistical tests p value = 0.034 (p < 0.05), it means there is a sigfnifikan association between husband's support with antenatal care visit at District of Sungayang Health Center, Tanah Datar Regency in 2017.

## DISCUSSION

### Univariate analysis

The results of this study show that most pregnant women (68.3%) in work area of public health Sungayang in 2017 did antenatal care visit based on standards. Visits of antenatal care is one form of behavior in the utilization of health services. Antenatal care visits should be done at least 4 times during pregnancy. Contact four times with the details once in the first trimester (before 14 weeks gestation) and second trimester (during 14-28 weeks gestational age), then at least 2 times the contacts on the third trimester of pregnancy during 28-36 week and after 36 weeks gestational age. (Kemenkes, 2014).

On table 3 views that pregnant women with antenatal care based on standard is more on unrisky age (68.4%), compared to a risky age (66.7%). Most respondents included reproductive age 20-35 year in which the maturity of reproductive organs and mentally to have pregnancy and childbirth is ready. At the age of 20-35 years of pregnant women will tend to doantenatal care visit on a regular basis because ithey feel its very important. While in pregnant women aged < 20 years tend notfully understand the importance of antenatal care visits on a regular basis while age > 35 years are more likely to be indifferent to antenatal care visits as they may have been feeling experienced pregnancy before.

This study showed expectant mothers with high education level (≥ High School) more 65.9%, compared to pregnant women with low level of education (<High School) as much as 34.1%. Education is one of the indirect causes of affecting antenatal visit.

The study results by expectant mothers who do not work is 82.9%, while pregnant women who work 17.1%. According to Anderson in Priyoto (2014), mother's employment is one of the factors that affect the utilization of health services (antenatal). Mother's employment status more or less affect the mother's time to utilize the services of health (antenatal care visits).

In this study the majority of expectant mothers have less knowledge about antenatal care visits that is 80.5%, while pregnant women with good knowledge of only 19.5%. This lack of knowledge can be caused by a lack of guidance or health information to pregnant women in the

region of clinics Sungayang. In addition, a lack of curiosity about the examination for pregnant woman is considered to be normal may also be one of the cause.

The study found that most (61.0%) of pregnant women have a negative attitude in antenatal care visit, while pregnant women who have a positive attitude that is 39.0%. Attitude is a reaction or response that is still closed to a stimulus from a person or object. Attitude consists of belief (faith), ideas, and concepts to form attitudes intact, and knowledge of thinking, beliefs, and emotions that are a reaction or response is still closed from someone's response to a stimulus or object, life, emotional or emotional evaluation against an object, and the trend to act, but not yet constitute an action.

The results of this study show the husband of pregnant women that support in antenatal care visit is 51.2% and 48.8% did not support. The support of family or husband is one element of the amplifier for the occurrence of someone's behavior. Support by the husband is needed for the pregnant mother. Support is provided by the husband by paying attention to the health condition of the mother and baby as well as examination of the pregnancy, delivery costs for pregnancy in the health service, as well as taking the mother and accompany her for pregnancy examination.

**Bivariate Analysis**

**The Association of Age of Pregnant Women with Antenatal Care Visits**

Based on statistical tests p-value = 1.000 (p 0.05 >) which means there is no association between age of pregnant women with visiting antenatal care. In line with the concept of according to Rohmah (2010) stating that the readiness of pregnant women in antenatal services follow relates to changes that occur due to increasing age and interaction with a background experience. In this case there is a conformity between the theory with the results of thisstudy, that group of pregnant women aged 20-35 years doing standard antenatal visits more than <20 or >35 years group .

Based on the percentage of the results of this research, the mother's age factor likely not much influence on the behaviour of pregnant women for checked her pregnancy, where both expectant mothers with at-risk age group (<20 or 35 years) and pregnant women with age not at risk (20-35) have the same opportunity to perform antenatal care visits in accordance with the standards.

**The Association of Education of Pregnant Women with Antenatal Care Visits**

Based on statistical tests p value = 0.017 ($p < 0.05$), which means there is significant association between the education of pregnant women with antenatal care visits. This research is also in line with the research done in Tanzania by Gupta, dkk (2014) stating that education is very high with regards to antenatal visits performed by pregnant women where education will affect the knowledge of pregnant women about the utilization of health care services. The research of Kabir (2012) in Bangladesh also showed a strong link between maternal education and utilization of antenatal layananan where the education level of mothers is a strong determining factor in antenatal care visits by pregnant women.

Based on the results of this research can be seen that the level of education a person particularly pregnant women greatly affects the behavior of pregnant women in antental care visit. Pregnant women with high levels of education have the opportunity to do a time 5.8 antenatal visits standard compared to pregnant women with low levels of education.

**The Association of Job of Pregnant Women with Antenatal Care Visits**

Based on statistical tests p value = 0.077 ($p > 0.05$), which means there is no association between the job of pregnant women with antenatal care visits. This is in line with the research

Susanto, dkk (2016) which found no relationship between the mother's employment status with an examination of antenatal care. The theory of Anderson in Priyoto (2014) mentioned that the mother's job is one of the factors that affect the utilization of health services (antenatal care). Mothers who don't work have more time to take advantage of health services in order to improve the health of the mother and fetus during pregnancy.However, based on the results of this research are all pregnant women who work do antenatal care visits in accordance with the standards. This illustrates both working mothers and that did not work actually has the same opportunity to perform antenatal care visits in accordance with the standards. Where only 32.8% of pregnant women don't work that do not appropriate antenatal care visits; Here can be seen both working mothers who do not work or have the same opportunities to perform antenatal care visits appropriate standards or employment status of mothers not related to antenatal care visits.

**The Association of Knowledge of Pregnant Women with Antenatal Care Visits**

Based on statistical tests, these results could not be tested, but there is a tendency of all pregnant women with knowledge of good antenatal care visit to appropriate standards. Research Patel, dkk (2016) in Maharashtra, India also stated that there is a relationship between knowledge with practice of antenatal care performed by pregnant women. Pregnant women who have a knowledge of good practice have been applying antenatal care visits properly.

Tamaka, et.al (2013) stated that mothers with less good knowledge but do visit the ANC in accordance with standards may be due to factors which cause such so that despite having less knowledge good but regular in visit ANC. contributing factor as the distance of the place of residence, such as the distance of the place of residence of pregnant women who have a place to stay close to the health service and also with the support of a husband because pregnant women who come to do the examination was accompanied by her husband will be motivated to do the inspection of pregnancy.

In this study the majority of the visible knowledge of pregnant women about antenatal care visits is still lacking. Most pregnant women do not know about the visit at least in pregnancy examination, service anything he dapatlan when checked my pregnancy, and less knowledgeable about the purpose of doing good for the mother's pregnancy examination as well as for the fetus. Pregnant women in the study also still less know about the hazard and risk in pregnancy. Therefore, to address the lack of knowledge of pregnant women this required additional information or intervention such as health education to pregnant women is related to antenatal care visits to health care personnel.

**The Association of Attitude of Pregnant Women with Antenatal Care Visits**

Based on statistical tests p value = 0.014 ($p < 0.05$) which means there is a significant association between attitude of pregnant women with antenatal care visits. In this study, the majority of pregnant women is still much in doubt answer about pregnancy examination at a minimum number of visits that will he do. This has a relationship with less knowledge about the visits of antenatal care in pregnant women. Knowledge will affect the attitude of a person towards something. Positive and negative attitude is closely associated with the person's behavior. With a good knowledge and a positive attitude will encourage the person's behavior toward better especially in the implementation of antenatal care visits for pregnant women.

In a study conducted by Ibrahim, et.al (2014) in Libya said that knowledge will influence someone to be positive or negative. Someone who has a good knowledge will have an impact on the

attitude positive. Pregnant women with a positive attitude has the opportunity to perform 12 times a visit antenatal care standards compared pregnant women with a negative attitude.

**The Association of Support of the Husband of Pregnant Women with Antenatal Care Visits**

Based on statistical tests p value = 0.034 (p < 0.05) which means there is a sifnifikan association between the husband's support of pregnant women visiting antenatal care. Research by Pafs, dkk (2015) in Rwanda stated that women who are not supported by her partner in pregnancy, potentially putting them at risk of morbidity is higher. Therefore, family support especially husband desperately needed by the mother during her pregnancy, either physical or psychological support. In the study, Pruthi et.al (2016) in India stated that 82% of men felt their primary role is to provide financial support to families rather than engage in preparation for childbirth pregnancy examination of his wife in particular. In the study stated that exposure to maternal health education and knowledge of maternal health is the major Predictor of engagement husband. In addition, women are more likely to use health services while their husbands to accompany the ANC visit.

Support the husband becomes the deciding factor because it will give the spouse support strengthening against the motivation to perform antenatal care visits. Husbands who have knowledge or understanding is more able to provide explanations and its support on the wife to carry out healthy behavior in this case included an examination of pregnancy. The results of this study in accordance with the theory, in which pregnant women are antenatal care visit standard 85.7% support the husband. In this case, pregnant women with husbands who support having the opportunity to make a visit time 6 antenatal care standards compared to pregnant women with husbands that don't support.

## CONCLUSION

1. There is no association between age and job with antenatal care visits.
2. There is a association between education, the attitude of the mother, the support of a husband with antenatal care visits.
3. There is a trend of the relationship between knowledge with antenatal care visits.

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# THE ASSOCIATION BETWEEN MACRONUTRIENT INTAKE WITH *STUNTING* INCIDENCE IN CHILDREN AGED 24-59 MONTHS IN IKUR KOTO PRIMARY HEALTH CENTER OF PADANG 2019

**Ermawati[1], Henny Fitria2, Elsa Yulia Sarah[3]**

[1]*Department of Obstetrics and Gynecology, FK UNAND, Jl. Perintis Kemerdekaan No.94 City, Indonesia Indonesia*

[2]*Bachelor of Midwifery Medical Faculty of Universitas Andalas, Niaga Street, no. 56, Padang, 25127, Indonesia*

[3]*Bachelor of Midwifery Medical Faculty of Universitas Andalas, Niaga Street no. 56, Padang, 25127, Indonesia*

ermawati@gmail.com[1]

## ABSTRACT

*Stunting* is a chronic malnourished problem caused by insufficient nutrient intake for a long period of time due to food delivery that does not fit the nutritional needs marked by height according to age less than-2SD under long median. *Stunting* can impact not only impaired physical growth but also the growth and development of the brain that can be decreased cognitive ability and intelligence and physical capacity so that it will decrease productivity Human resources. The purpose of this research is to know the correlation of macronutrient intake with *Stunting* incidence in children aged 24-59 months in Ikur Koto Primary health center padang 2019.

This study is quantitative study with cross sectional design, conducted at Ikur Koto Primary health center from July 2019 to August 2019. The samples in this study were eighty-sixmothers who had children aged 24-59 months . Sampling Techniques with *Multistage Random Sampling*. The mothersas a respondent interviewed directly regarding the intake of macro nutrients by using a food questionnaire *sq-ffq* and children's height measured by using microtoice tools the *Stunting* incidence in children is measured by body height/age indicator and Interpreted with the WHO-Anthro software. Analysis of data by univariate and bivariate using Chi-square analysis ($P \leq 0.05$).

The results of thestudy showed that 38.4% of children aged 24-59 months were stunted, most children had good carbohydrate intake of 54.7%, good protein intake of 57% and a good category of fat intake of 51.2%. The results of the chi-square analysis obtained a significant correlation between less of carbohydrate intake, less of protein intake and less of fat intake with *Stunting* incident in children aged 24-59 months.

There is an association between intake of carbohydrates, protein and fats with *Stunting* incident in children aged 24-59 months. It is expecte that parents should pay more attention to the needs and adequacy of nutrition in daily food.

**Keyword**: Stunting, carbohydrate intake, protein intake, fat intake.

## INTRODUCTION

*Stunting*can be interpreted as a long-term result of malnutrition with height by age less than -2 SD (Standard Deviation) under the long median (WHO, 2010). *Stunting* is a chronic malnutrition problem caused by a lack of nutrition in a long time due to food that is not in accordance with nutritional needs. *Stunting*is a manifestation of growth failure that starts in the womb until a two year old or 1000 first day of Birth. Globally, about 1 in 4 children under five is *stunted* (UNICEF, 2013).

In 2017, about 22.2% or about 150.8 million toddlers in the world were stunted. According to data collected by the World Health Organization in 2005-2017, Indonesia is the third highest country of *stunting* prevalence in southeast Asia (Kemenkes RI, 2018). In Indonesia, *stunting* prevalence continues to increase. In the year 2016 (27.5%), the year 2017 (29.6%), and the year 2018 (30.8%) (Kemenkes RI, 2018; Riskesdas, 2018). The World Health Agency (WHO) restricts *stunting* issues in

every country, province and district by 20%. West Sumatera Province, the prevalence of *stunting* in 2013 (39.2%) and the year 2018 (30.3%) (Kemenkes RI, 2018).

The cause of*stunting*are very diverse, as simple as direct *stunting* is the lack of nutrient intake since the fetus and continues until the infant is born and enters the child phase to adolescence, as well as an infectious disease Infants or children. Meanwhile, indirect causes include parenting patterns, families food and environmental sanitation and health care utilization (Fikawati, 2017).

Nutritional intake is the closest thing to affecting a person's nutrition. Nutrients consist of macronutrients and micronutrients. Macronutrients are a major source of energy and provide essential nutrients in the body. Macroronutrients consist of 3 main parts, namely fats, protein and carbohydrates. While micronutrients consist of vitamins and minerals (Barasi, 2009).

Good nutrient intake plays an important role in achieving optimal body growth, where optimal body growth includes brain growth that determines one's intelligence. The prolonged shortage of nutrients shows long-term effects on growth, and the quality of family food availability is also very influential in child growth and development. If the quality of low nutrition intake coupled with the inadequacy of intake of nutrients consumed will effect the toddler is a late growth and development, decreased immune function, and impaired cognitive function (Lamid, 2015).

Previous studies have expressed a significant correlation between the intake of macronutrients and *stunting* in infants (Evan Regar, 2012). Similarly, the research conducted by Anisa in 2012 shows that there is a correlation between the intake of macro nutrients with the height of the body.

According to the data from the Padang City Health office acquired the prevalence of *stunting* children is 20.05%. Prevalence of children *stunting* the highest in Padang city in 2017 is Pauh Primary health center which is 32% and in 2018 Ikur Koto Primary health center in Koto Tangah District 35.1%.

Therefore, researcher is interested in examining the correlation between macronutrient intake and the incidence of *stunting* in children aged 24-59 months in Ikur Koto Primary Health Center of Padang.

## METHODS

This research is an analytical study with cross sectional design. Data collection is conducted from July to August 2019. The population in this research is mothershaving children aged 24-59 months in Primary health center of Padang as many as 622 people. The large sample of research taken is as much as 86 subjects. Sampling was carried out with the*Multistage Random Sampling* technique. Data processing is carried out with the *Chi-square* analysis.

## RESULT

The characteristics of respondents involved in this study include Mother's age, last education, occupation, number of family dependents, family income per month and children's age and gender. The frequency distribution of respondents characteristic is presented in table 5.1.

**Table 5.1The Frequency distribution of Mother characteristics**

| No | Variables | f | % |
|---|---|---|---|
| 1. | Age of Mother | | |
| | - <20 years | 0 | 0 |
| | - 20-35 years | 64 | 74,4 |
| | - >35years | 22 | 25,6 |
| 2. | Mother's education | | |
| | - Never school / not completed primary school | 0 | 0 |
| | - Primary school / MI / equivalent | 1 | 1,2 |
| | - Junior High School / equivalent | 7 | 8,1 |
| | - Senior high School Graduate / equivalent | 66 | 76,7 |
| | - Graduated PT / equivalent | 12 | 14,0 |

| | | | |
|---|---|---|---|
| 3. | Workmother | | |
| | - housewife | 72 | 83,7 |
| | - farmer | 0 | 0 |
| | - labor | 3 | 3,5 |
| | - PNS / Private employees | 9 | 10,5 |
| | - Entrepreneur | 0 | 0 |
| | - Other | 2 | 2,3 |
| 5. | Number of family dependents | | |
| | - 1-3 | 49 | 57 |
| | - 4-6 | 37 | 43 |
| | - >6 | 0 | 0 |
| 6. | Family Income (according to UMK) | | |
| | - <Rp. 2.289.228 | 37 | 43 |
| | - ≥Rp. 2.289.228 | 49 | 57 |

Based on the table 5.1 shows that most mothers are in the age group of 20-35 years. The highest education of this mothers are graduated from senior high school/equivalent. The majority of mothers as housewives. Most families have a dependents of 1-3 children and a family income per month is mostly in accordance with the city of Padang UMK.

**Table 5.2 The Frequency Distribution of the charateristic child subjects study.**

| No | Variables | f | % |
|---|---|---|---|
| 1 | Age of children | | |
| | - 24-36Month | 37 | 43 |
| | - 37-59Month | 49 | 57 |
| 2 | Gender | | |
| | - Female | 45 | 52,3 |
| | - Male | 41 | 47,7 |

Table 5.2 shows most children were in the age group of 24-35 months the respondents of the study were generally female.

**Univariate Analysis**

**Table 5.3 The Frequency distribution Incidence of *Stunting*.**

| Incidence *Stunting* | f | % |
|---|---|---|
| *Stunting* | 33 | 38,4 |
| Normal | 53 | 61,6 |
| Total | 86 | 100 |

Table 5.3 shows that of 86 respondents, 33 (38.4%) *Stunting* and 53 (61.6%) children were normal.

**Table 5.4 The Average Body Height and Z-Score Tb/U**

| Variables | Mean±SD | Minimum-Maximum |
|---|---|---|
| Height for children (cm) | 92,314±8,9722 | 75-112 |
| Z-*Score* children | -1,6792±0,10697 | -3,89-0,68 |

Based on the table 5.4,it is found that the average body heightof children aged 24-59 months in Ikur Koto Primary Health Center of Padang 92 cm with an average Z-Score-1.67

**Table 5.5The Frequency Distribution of carbohydrate intake.**

| Carbohydrate Intake | f | % |
|---|---|---|
| Less | 39 | 45,3 |
| Good | 47 | 54,7 |

| | | |
|---|---|---|
| Total | 86 | 100 |

According to the table 5.5, the majority of children 47 (54.7%) have good carbohydrate intake.

**Table 5.6The Average of carbohydrate intake**

| Age group in month | Carbohydrate Intake | | |
|---|---|---|---|
| | **Mean±SD (gr)** | **%AKG** | **Minimum-maximum (gr)** |
| 24-36 month | 131,11±50,23 | 81,27% | 77,5-343 |
| 37-59 month | 176,71±36,55 | 81,26% | 95,40-283 |

Based on the table 5.6, it is obtained that average child carbohydrate intake in a group of age 24-36 months is 131.11 gram when compared with AKG 2013 child carbohydrate intake has been fulfilled 81.27% AKG.

**Table 5.7The Frequency distribution of Protein intake.**

| Protein Intake | f | % |
|---|---|---|
| Less | 37 | 43 |
| Good | 49 | 57 |
| Total | 86 | 100 |

According to the table 5.7 It is found that most respondents 49 (57%) Children have a good protein intake.

**Table 5.8The Average of Protein intake.**

| Age group in month | Protein Intake | | |
|---|---|---|---|
| | **Mean±SD (gr)** | **%AKG** | **Minimum-maximum (gr)** |
| 24-36 month | 21,57±8,63 | 80,63% | 11,7-54,8 |
| 37-59 month | 29,48±10,17 | 84,74% | 14,5-53,2 |

According to the table 5.8, the average amount of protein intake in children aged 24-36 months is 21.57 grams or if compared with AKG 2013 the child protein intake has been fulfilled 80.63% AKG, while in the average age group of 37-59 months Protein intake of children 29.48 grams and when compared with AKG 2013 already meet 84.74% AKG.

**Table 5.9The Frequency distribution of fat intake.**

| Fat Intake | f | % |
|---|---|---|
| Less | 42 | 48,8 |
| Good | 44 | 51,2 |
| Total | 86 | 100 |

According to the table 5.9, It is found that most respondents 44 (51.2%) Children have good fat intake.

**Tabel 5.10The Average of fat intake.**

| Age group in month | Fat Intake | | |
|---|---|---|---|
| | Mean±SD (gr) | %AKG | Minimuml-maximum (gr) |
| 24-36 month | 36,52±9,96 | 80,12% | 22,8-81,20 |
| 37-59 month | 51,16±11,48 | 80,79% | 24-98,2 |

Based on the table 5.10, it is found that the average amount of fat intake in children aged 24-36 months is 36.52 grams or when compared with AKG 2013 children fat intake has fulfilled 80.12% AKG, while the average age group is 37-59 months Child fat intake 51.16 grams and when compared with AKG 2013 has fulfilled 80.74% AKG.

**Bivariate Analysis**

**Table 5.11 The Correlation Between CarbohydrateIntake and Incidence of *Stunting***

| Carbohydrate Intake | Incidence of *Stunting* | | | | Total | | OR (95% Cl) | *p- value* |
|---|---|---|---|---|---|---|---|---|
| | *Stunting* | | Normal | | | | | |
| | f | % | f | % | f | % | | |
| Less | 23 | 59,0 | 16 | 41,0 | 39 | 100 | | |
| Good | 10 | 21,3 | 37 | 78,7 | 47 | 100 | 5,319 (2,065-13,699) | 0.001 |
| **Total** | **33** | **38,4** | **53** | **61,6** | **86** | **100** | | |

Based on the table 5.11, it can be concluded that most *Stuntingincident*s occur in children with less carbohydrate intake of (59%) compared to children who have good carbohydrate intake (21.3%). Statistical test result using *Chi-square* obtained value p = 0.001 (P ≤ 0.05)with an OR value = 5.319. Based on the results it can be concluded that there is a meaningful correlation between intake of carbohydrates and*stunting.*

**Table 5.12The Correlation Between Protein intake and Incidence of *stunting***

| Protein Intake | Incidence of *Stunting* | | | | Total | | OR (95% Cl) | *p- value* |
|---|---|---|---|---|---|---|---|---|
| | *Stunting* | | Normal | | | | | |
| | f | % | f | % | f | % | | |
| Less | 28 | 75,7 | 9 | 24,3 | 37 | 100 | | |
| Good | 5 | 10,2 | 44 | 89,8 | 49 | 100 | 27,378 (8,317-90,126) | 0.000 |
| **Total** | **33** | **38,4** | **53** | **61,6** | **86** | **100** | | |

Based on the table 5.12, it can be concluded that most *Stuntingincident*s occur in children with less Protein intake of (75.7%) compared to children with good protein intake (10.2%).Statistical test result using *Chi-square* obtained value P = 0.000 (P ≤ 0.05)with an OR value of 27,378. Based on these results it can be concluded that there is a meaningful correlation between protein intake and incidence of *stunting.*

**Table 5.13 The Correlationbetween Fat Intake andIncidence of*Stunting*.**

| Fat Intake | Incidence of *Stunting* | | | | Total | | OR (95% Cl) | *p- value* |
|---|---|---|---|---|---|---|---|---|
| | *Stunting* | | Normal | | | | | |
| | f | % | f | % | f | % | | |
| Less | 24 | 57,1 | 18 | 42,9 | 42 | 100 | | |
| Good | 9 | 20,5 | 35 | 79,5 | 44 | 100 | 5,185 (1,997-13,461) | 0.001 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Total** | **33** | **38,4** | **53** | **61,6** | **86** | **100** |

Based on the table 5.13, it can be concluded that most *Stuntingincident*s occur in children with less fat intake (57.1%) compared to children with good fat intake (20,5%). Statistical test result using *Chi-square* obtained value p = 0.001 (P ≤ 0.05)with an OR value of 5.185. Based on these results can be concluded that there is a meaningful correlation between protein intake with the *stunting* incident.

## DISCUSSION

The respondents in the study are 86 mothers who have children aged 24-59 month old inIkur Koto Primary Health Center Padang. The description of respondents by age shows the highest distribution at the age of 20-35 years. This age shows that respondents were at an adult age and mature in parenting. According to Budiman(2013) aged 21-35 years is a productive age of one's health, the age of adulthood gives greater opportunity to study and develop its intellectual power.Research conducted by Y. Jiang (2014) where the age above 35 years when pregnant is at risk of children *stunting* 2.74 times than mothers who gave birth at the age of 25-35.

Most of the respondents have graduated in senior high school (76.7%). Oktavia's research (2017) has said that the high level of education is in line with the ease of understanding the information and the easier it is to implement its knowledge in particular behaviors in health and Nutrition.

The type of work of the respondent in this study largely showed that the housewives were 83.7%, so that mothers have more time to increase her attention and support in feeding practice to the child. Mothers who work less can monitor children's patterns and meal time and the attitude of mothers who choose to let alone when the child does not spend their food (Proboningrum dan Khomsan, 2016).

The respondents in this study mostly have a 1-3 child number of 57%. With fewer children The mother are expected to be more focused in parenting. So that children's opportunities are greater in obtaining good feeding practices. According to Pandin(2016), large families are many families in a family that will affect household expenditure. Including in this case affects food consumption.

The family income in this study mostly have income according to UMK 57%. According to Sulistyoningsih (2011) the high income will increase the chances of buying groceries or food with good quantity and quality, and vice versa low income will reduce the purchasing power of food with quality And good quantity.

In this study the most numerous female genders (52.3%). And the age of respondents the most children in the age group was 24-35 month by 40.7%.

### Incidence of *Stunting*

The results showed that the number of *Stuntingincident*s in Ikur Koto Primary Health Center of Padang is 38.4% while the percentage of children who have a normal height is 61.6%. This percentage is higher compared with the 2017 global data of 22.2% and higher compared to the national data of 2018, which is 30.8% and higher compared to the *stunting* percentage in West Sumatera in 2016-2017 is 30.6% (Kemenkes RI, 2013; Riskesdas, 2018; Kemenkes RI, 2018). This is likely due to the wider coverage of the survey area on data retrieval globally, as well as the extent of data retrieval in Riskesdas survey. This is likely due to the wider coverage of the survey area on data retrieval globally, as well as the extent of data retrieval in Riskesdas survey (2018).

The results of this research is lower compared to the research conducted by Widyaningsih et al (2018) shows the prevalence of *stunting* in toddlers 24-59 months to 41%, and lower when compared to the research conducted Hapsari (2018) Shows the *stunting* prevalence in children aged 12-59 to 50% in which the percentage of children aged 24-59 months were stunted at 60% and the age of infants under 24 months was 40%.

*Stunting* can occur due to nutritional deficiencies, especially in 1000 HPK (first day of life). Infant nutrition intake is very important in supporting growth in accordance with its growing graph in order not to occur growth faltering that can cause *stunting*.Toddlers *stunting* include chronic nutritional problems caused by many factors such as socio-economic, nutrition when pregnant

women, pain in infants, and lack of nutritional intake in infants. Future *stunting* toddlers will have difficulty achieving optimal physical and cognitive development(Kemenkes, 2018).

**Carbohydrate intake**.

The results of this study were obtained 54.7% of respondents had good carbohydrate intake and 45.3% of respondents had less carbohydrate intake. The results of this research in line with Ayuningtyas research (2018) in the working area of Sumber Urip, Rejang District,where the majority of toddlers have adequate carbohydrate intake (62.1%) and less carbohydrate intake (37.9%). The results of this research in line with other research conducted by Sulistianingsih (2013), about the lack of eating intake as the cause of the occurrence of short toddler (*stunting*) in Bandar Lampung obtained that 31 (64.6%) Infants with carbohydrate intake according to AKG and 17 (35.4%) Infants with less carbohydrate intake than AKG.

**Protein intake**

The results from research found 49 (57%) Respondents have good protein intake and 37 (43%) Respondents had a low protein intake. Research conducted by Sulistianingsih, et al (2015) in the village of Tanjung Baru Peace City Lampung obtained that 34 (70.8%) Children have protein intake according to AKG and 14 (29.2%) Children have less protein intake than AKG. An other study was also done by Mugianti (2018) about the cause of children *stunting* aged 24-60 months in Sukorejo District Blitar found that 17 (54.8%) Children have adequate category of protein intake and 14 (45.2%) Children have a low category of protein intake.

**Fat intake**

The results of this study were obtained 44 (51.2%) Respondents have good fat intake and 42 (48.8%) Respondents have less fat intake. Research conducted by Oktarina and Sudiarti (2013) on risk factors of *stunting* in infants (24-59 months) in Sumatra is found that 48.5% of children have low fat intake and 51.5% of children have adequate fat intake. The other research also done by Azmy and Mundiastuti(2018) obtained the result that 15 (62.5%) Toddlers have adequate fat intake and 13 (45.8%) toddlers have less of fat intake..

**The correlation between carbohydrate intake and incidence of *Stunting* in children aged 24-59 month in Ikur Koto Primary health center of padang 2019.**

A statistical test result by using a test that *Chi-square* shows the value p = 0.001 (P ≤ 0.05). Based on these results can be concluded that there is a meaningful correlation between intake of carbohydrates and*stuntingincident*s in children aged 24-59 months in Ikur Koto Primary Health Center Padangwith OR = 5,319. Thats mean the toddlers who have lesscarbohydrate intake (< 80% AKG) are at risk of *stunting* 5 times greater than toddlers who have good carbohydrate intake (≥ 80% of AKG). From the results of this study came from 33 infants who have stunted 23 (59%) Derived from children who have less carbohydrate intake and 10 (21.3%) derived from good carbohydrate intake.This is in line with the research conducted by Ayuningtyas (2018) about the intake of macro and micro nutrients to *stuntingincident*s in infants in the working area of Rejang Lebong Urip District (2018) is found that there is a correlation of carbohydrate intake and *stuntingincident*s with a value of P = 0,003.

Carbohydrate intake is very important for the body. Carbohydrates are needed in every life cycle to produce energy, as well as toddler age where the level of playing activity is high and requires energy for brain development (Panel and Nda, 2013).

**Correlation of Protein intake with incidence of *Stunting* in children aged 24-59 months in Ikur Koto Primary health center of padang 2019.**

The results of this study showed that 28 (75.7%) *Stunting* children come from children who have less protein intake and 5 (10.2%) Of a child who has a good protein intake. Once the *chi-square* test is obtained the value P = 0,000 which means that p ≤ 0.05. Based on statistical results can be concluded that there is a significant correlation between protein intake and*stuntingincident*s in

children aged 24-59 months in the work area of Ikur Koto Padang with OR = 27,378. Thats mean the children with protein intake are less risky to be stunted by 27 times compared to children who have good protein intake.

This is in line with the research conducted by Fitriahadi(2018), there is a correlation between families with low economic status as much as 32 has children *stunting* (47.8%), while families with high economic status as much as 4 children are *stunting* (14.3%). Children with low family income are at risk of *stunting* 8.5 times compared to children with high family income (Lestari *et al*, 2014).

This research is in line with the research conducted by sulistianingsih (2015) about the lack of meal intake as a cause of the incidence of *stunting* toddlers that indicates that there is a correlation between proteinintake and status of Nutrition (TB/U) in infants with p value = 0.002 and OR = 10.00.

Protein is one of macro nutrition that is very important nutrients because it is closely related to the process of life. All life cells are associated with protein nutrients. Protein are important for a variety of structural and functional purposes as well as essential for body growth and repair (Jauhari, 2013). As a structural function, protein act as body builders. Protein also functions in the growth and maintenance of tissues, and replaces the dead cells(Gandy, J. Webster ; 2007).

**The Correlation between fat intake and incidence of *Stunting* in children aged 24-59 month in Ikur Koto Primary Health Center of Padang 2019.**

The results of this study showed that from 33 toddlers are *Stunting* 24 (57%) Children have less fat intake and 9 (20.5%) Children have good fat intake. Once the *chi-square* test is obtained the value P = 0.001 (P ≤ 0.05). Based on statistical results it can be concluded that there is a significant link between fat intake and*stuntingincident*s in children aged 24-59 month in the work area Puskesmas Ikur Koto Padang Year 2019 with OR = 5,185.

This means that children with less than risk of fat intake have stunted 5 times. This is in line with the research conducted by Oktarina and Sudiarti (2013) on risk factors of *stunting* in infants 24-59 months in Sumatra are obtained that there is a significant correlation between fat intake and *stuntingincident*s with value P = 0.02 where The proportion of toddlers with low levels of fat intake is *stunting* more than the proportion of toddlers with adequate fat intake. Toddlers with a low fat intake rate of 1.31 times more risky than infants who have adequate fat intake.

Fat intake is associated with the nutritional status of TB/U due to the fat contained essential fatty acids that have a role in regulating health, in addition to saving energy and fat as a means of transporting and solvent fat soluble vitamins in the body where These functions greatly affect the growth of infants (Susetyowati, 2017).

**Conclusion**

1. Majority of mothers aged in Ikur Koto Primary Health Center of Padang were 20-35 years with a senior high school education / equivalent, work as a housewife with family dependents of 1-3 people and the majority of family income in accordance with UMK. Most children aged 24-35 month old and the majority of children are female.
2. A small proportion of children aged 24-59 months in Ikur Koto Primary Health Center of Padang is experienced *Stunting*. The incidence of *stunting* in Ikur Koto Primary Health Centr of Padang in 2019 includes high category public health problems.
3. Most of children aged 24-59 months in Ikur Koto Primary Health Center of Padang have good category carbohydrate.
4. Most of children aged 24-59 months in Ikur Koto Primary Health Center of Padang have a good category of Protein intake.
5. Most of children aged 24-59 months in Ikur Koto Primary Health Center of Padang have a good category of fat intake.
6. Less of carbohydrates intake have meaningful correlation with incidence of *stunting*.
7. Less of protein intake have meaningful correlation with incidence of *stunting*.
8. Less of fat intake have meaningful correlation with incidence of *stunting*.

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# Factors Related To Learning Achievements In School Children In Sdn 11 Kampung Jua Padang 2019

**Feni Andriani[1],Erda Mutiara Halida[2], Enjeliana Pramesti[3]**

[1] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[2] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[3] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
feniandriani@med.unand.ac.id[1]

**Abstract**

Children with low productivity and quality will have an impact on poverty and the quality of human resources in the future. One way to assess the quality of children is by seeing the results of learning achievement. The achievements of Indonesian children in the world, have a far level of intelligence from other countries. This is due by several factors, namely the nutritional status and socio-economic status of parents. The aim of this research is to determine the factors related to learning achievement in school children at SDN 11 Kampung Jua Padang 2019. This research uses anpaired *cross-sectional* . The population in this research were grade 1, 2, 4 and 5 in SDN 11 Kampung Jua Padang. The sample was taken by of 57 respondents. Sampling is done *simple random sampling technique.* Data analysis by univariate and bivariate using *Chi Square Test* (p <0.05). The results of bivariate research showed that there ls a relationship between parent education with learning achievement (p = 0,011), there is a relationship between parents' income with learning achievement (p = 0,006), there is a relationship between the number of families with learning achievement (p = 0,041), no relationship *stunting* with learning achievement (p = 0,146), there is no work relationship between mothers with learning achievement (p = 1,000). Parental education, parents' income and the number of families related to learning achievement. *Stunting* and mother's work are not related to learning achievement. Expected with this research, parents can provide attention and support for children's learning so that they get good learning achievements

**Keywords** : Learning achievement, *stunting*, parents education, mothers work, parents income, and number of families

## INTRODUCTION

Development of the Indonesian nation relates to quality Human Resources (HR). Quality human resources, namely having a strong physical, strong mentality and excellent health and ability in science and technology (Salimar, 2013). HR quality can be seen from the Community Development Index (HDI) or *Human Development Index* (HDI). Children with low productivity and quality will have an impact on poverty and reduce the quality of human resources in the future. One way to assess children's quality is to see the results of learning achievement.Achievement according to the Large Indonesian Language Dictionary (KBBI, 2011) is the resultof an effort achieved from what is done or sought, while learning is trying to obtain intelligence or knowledge. So that it can be concluded that learning achievement is the result of someone's effort achieved during obtaining knowledge at school. Through learning outcomes students can know the level of achievement and how much their academic abilities. School Age Children are the next generation and their quality determines the quality of the nation in the future. School-age children typically in Indonesia are children aged 6-12 years (Amrah, 2013).

The quality of human resources if judged by children's achievements, based on the results of the OECD PISA (*Organization of Economic Co-operation and Development-Program for International Student Assessment*) in 2012 showed the achievements of Indonesian children in the world ranked 64$^{th}$ out of 65 countries in the field of *science*, reading and mathematics (TNP2K, 2018). In 2015 Indonesia ranked 62$^{nd}$ out of 70 countries in the field of *science* in Singapore, Vietnam and Thailand in the 1$^{st}$, 8$^{th}$ and 54$^{th}$ position (OECD PISA, 2016). This shows that school children in Indonesia as the nation's next generation have a level of intelligence that is far from other neighboring countries.

One of the factors that influence learning achievement in school children is nutritional status. Poor nutritional status will cause disruption to the growth and development of children which will affect the quality of human resources in the future. Nutritional problems will have a bad impact on the brain, because it is irreversible or can no longer develop optimally (Maleke, 2015).

One of the major nutritional problems in Indonesia is *Stunting*. *Stunting* is a linear growth disorder caused by chronic malnutrition, which is expressed by the z-score of height according to age (TB / U) less than -2 standard deviation (SD) below the standard average (WHO, 2010). Sa'adah's research (2014) shows that there is a significant relationship between *stunting* and learning achievement, children with malnutrition will have an impact on cognitive abilities and brain abilities.

The prevalence of *stunting* in school children aged 5-12 years in Indonesia is 27,7% in 2017, with a short prevalence of 19.4% and very short 8,3% (Ministry of Health, 2018). According to WHO the prevalence of *stunting* is a public health problem if the prevalence is 20% or more (WHO, 2010).

Other factors that most influence the learning achievement are socio-economic such as education, employment, parents' income and the amount. Socio-economic implications for parenting, provision of nutritional intake, differences in parental aspirations for children's education, children's aspirations for education, facilities provided to children, and time provided for educating children (Grace, 2017).

Parents who are highly educated and well-off are positively correlated with children's learning achievement, the higher the education and income of parents, the more positive the role of school children. As for the relationship between learning achievement and family members, only children show higher academic achievement than children who have siblings (Mahmud, 2017). According to Sudargo (2018) work that requires mothers to leave home causes a lack of interaction between mother and child, this results in a lack of stimulation given to children so that it can affect learning achievement.

According to Hasan's research (2014) there is a relationship between socio-economic and children's achievement level. Children from low socio-economic conditions are less likely to be malnourished than the middle to upper socioeconomic level. In addition, malnutrition at a young age can affect mental development that will affect the ability to think.

The percentage of children *stunting* in West Sumatra in 2017 is 27% with 19,5% short and 7.5% very short at the age of 5-12 years (Ministry of Health, 2018). While the percentage of poverty in West Sumatra is 6,65% or 357.13 thousand people and for the city of Padang at 4,70% or 44,04 thousand people (BPS Sumbar, 2019). Based on the results of health screening for elementary school students in Padang City in 2017 for school-age children, the *stunting* highestin 2017 in Lubuk Begalung Subdistrict in the Pegambiran Community Health Center working area with 836 children *stunting*.

The initial survey conducted by researchers found that based on the recapitulation of the Padang City SD / MI Elementary School, SDN 11 Kampung Jua was ranked 184 out of 406 schools in the academic year 2017/2018 and the prevalence of *stunting* in Kampung Jua SDN 11 was based on health data from all elementary school students in the city Padang 2017 is 83 children, of which 39 are male and 44 are *stunting*. Measurements of height were carried out on 10 respondents and 2 children were *stunted*. Interviews of 10 respondents found that the majority of respondents had middle to lower economic levels with working father status and 8 mothers not working. From the results of the initial survey it was also found that in general 6 out of 10 mothers had as many as 3-4 people.

## METHOD

This study uses an unpaired cross sectional design. The sample consisted of 57 respondents. Sampling using *simple random sampling technique.* Data analysis by univariate and bivariate using *Chi Square* ($p < 0.05$).

**RESULT**

**Tabel 1. Distribution of Frequency Characteristics of Gender Respondents in School Children at SDN 11 Kampung Jua Padang**

| Gender | n | % |
|---|---|---|
| Male | 31 | 54,4 |
| Women | 26 | 45,6 |
| Total | 57 | 100,0 |

From table 1 shows the majority of respondents were male as many as 31 people (54.4%) .

**Tabel 2. Frequency Distribution of Characteristics of Age Respondents in School Children in SDN 11 Kampung Jua Padang**

| Age | n | % |
|---|---|---|
| 8 | 15 | 26,3 |
| 9 | 15 | 26,3 |
| 10 | 6 | 10,5 |
| 11 | 9 | 15,8 |
| 12 | 10 | 17,5 |
| 13 | 2 | 3,5 |
| Total | 57 | 100,0 |

From table 2 shows the distribution of age of respondents ranged from 8-13 years and most respondents were 8 years and 9 years old as many as 15 people (26.3 %), 12 years (17.5%), 11 years (15.8%).

**Univariate Analysis**

**Table 3. Frequency Distribution of Factors Associated with Learning Achievement in School Children at SDN 11 Kampung Jua**

| Characteristics of Respondents | n | % |
|---|---|---|
| Learning Achievement | | |
| Low | 11 | 19,3 |
| High | 46 | 80,7 |
| Level *Stunting* | | |
| *Stunting* | 17 | 29,8 |
| Normal | 40 | 70,2 |
| Parents Education | | |
| High | 17 | 29,8 |
| Low | 40 | 70,2 |
| Mothers Work | | |
| Working | 8 | 14,0 |
| Not Working | 49 | 86,0 |
| Parents Income | | |
| Poor | 30 | 52,6 |
| Not Poor | 27 | 47,4 |
| Number Of Families | | |
| Large | | |
| Small | | |

| | | |
|---|---|---|
| | 36 | 63,2 |
| | 21 | 36,8 |

From table 3 can be seen that the learning achievements of school children in SDN 11 Kampung Jua Padang show children who have high learning achievement (80.7%), normal in height (70.2%), high maternal education (70.2%), mothers not working (86.0%), not poor (52.6%) and large in the number of families (63.2%).

**Bivariate Analysis**

**Table 4.Relationships *Stunting* with Learning Achievement in School Children at SDN 11 Kampung Jua Padang**

| *Stunting* | Learning Achievement | | Total | P *value* |
|---|---|---|---|---|
| | Low | High | | |
| | n (%) | n (%) | n (%) | |
| *Stunting* | 1(9,1) | 16(34,8) | 17(29,8) | 0,146 |
| Normal | 10(90,9) | 30(65,2) | 40(70,2) | |

Based on table 4 shows that the percentage of children who experience low learning achievement is found in normal children higher than *stunting.* Based on the statistical test obtained *p value* = 0.146 (*p*>0.05), meaning that there is no relationship between *stunting* and children's learning achievement at SDN 11 Kampung Jua Padang.

**Table 5. Relationship between Parents' Education with Learning Achievement in School Children at SDN 11 Kampung Jua Padang**

| 1. | Educatio n | Learning Achievement | | Total | P *value* |
|---|---|---|---|---|---|
| | | Low | High | | |
| | | n (%) | n (%) | n (%) | |
| Low | | 7 (63,6) | . 10(21,7) | . 17(29,8) | . 0,011 |
| High | | . 4(36,4) | . 36(78,3) | . 40(70,2) | |

Based on table 5 shows that the percentage of children who experience Low learning achievement found in children with parents with low education is higher compared to parents who are highly educated. Based on the statistical test obtained *p value* = 0.011 (*p* <0.05), meaning that there is a relationship between parental education and children's learning achievement at SDN 11 Kampung Jua Padang.

**Table 6. Relationship between Mother's Work with Learning Achievement in School Children at SDN 11 Kampung Jua Padang**

| Job | Learning Achievement | | Total | P *value* |
|---|---|---|---|---|
| | Low | High | | |
| | n (%) | n (%) | n (%) | |
| Working | 1 (9,1) | 7(15,2) | 8(14,0) | 1,000 |
| Not working | 10(90,9) | 39(84,8) | 49(86,0) | |

Based on table 6 shows that the percentage of children who experience Low learning achievement is found in children with mothers not working higher than working mothers. Based on the statistical test obtained *p value* = 1,000 ($p$>0.05), meaning that there is no relationship between the work of mothers and children's learning achievement at SDN 11 Kampung Jua Padang.

**Table 7. Relationship of Parents Income to Learning Achievement in School Children at SDN 11 Kampung Jua Padang**

| Parents Income | Learning Achievement | | Total | P *value* |
|---|---|---|---|---|
| | Low | High | | |
| | n (%) | n (%) | n (%) | |
| Poor | 10(90,9) | 20(43,5) | 30(52,6) | 0,006 |
| Not Poor | 1(9,1) | 26(56,5) | 27(47,4) | |

Based on table 7 shows that the percentage of children who experience low achievement is found in children from poor families who are higher than those who do not *poor*. Based on the statistical test obtained *p value* = 0.006 ($p$ <0.05), meaning that there is a relationship between parents' income and children's learning achievement at SDN 11 Kampung Jua Padang.

**Table 8. Relationship of Number of Families with Learning Achievements in School Children at SDN 11 Kampung Jua Padang**

| Number of Families | Learning Achievement | | Total | P *value* |
|---|---|---|---|---|
| | Low | High | | |
| | n (%) | n (%) | n (%) | |
| Large | 10(90,9) | 26(56,5) | 36(63,2) | 0,041 |
| Small | 1(9,1) | 20(43,5) | 21(36,8) | |

Based on table 8 shows that the percentage of children who experience low learning achievement is found in children with a large number of families higher than the number of small families. Based on statistical tests obtained *p value* = 0.041 ($p$ <0.05), meaning that there is a relationship between the number of families with children's learning achievement at SDN 11 Kampung Jua Padang.

## DISCUSSION

The results of the study showed that respondents from classes I, II, IV and V were in the average age range of 8-13 years. Basically aged 7-11 years, children's cognitive development from the point of its characteristics are the same as the cognitive abilities of adults (Syah, 2015). The majority of respondents in this study were 8 and 9 years old, namely 15 people (26.3%). Based on the results of the study, most of the respondents were male sex.

Based on the results of the study, the percentage of children with low learning achievement in SDN 11 Kampung, even in 2019, is 19.3% and the percentage of children who have high learning achievement is 80.7%. It can be said that school children at SDN 11 Kampung Jua have high levels of learning achievement.

The results showed the percentage of children with low learning achievement at SDN 11 Kampung, even in 2019, which was 19.3% and the percentage of children who had high learning achievement was 80.7%. It can be said that school children in SDN 11 Kampung Jua have high levels of learning achievement which means respondents have a report card value above the average.

This is in line with the research conducted by Sa'adah (2014) which shows that the learning achievement of students of SDN 01 Guguk Malintang Kota Padang Panjang is on average good because the achievement value is above the Minimum Completion Criteria (KKM). Descriptions of learning achievement can be seen in report cards and set the minimum learning success of students for disclosure of learning outcomes (Shah, 2015).

Based on the results of the study the percentage ofchildren *stunting* in SDN 11 Kampung also in 2019 is 29.8% and the percentage of children who have a normal height is 70.2%. This result is higher than thepercentage *stunting* nationalin 2017 which was 27.7% and higher compared to thepercentage *stunting* in West Sumatra in 2017, which was 27% (Ministry of Health, 2018). Low learning achievement is caused by concentration and weak learning ability and parents' lack of attention to the needs and ways of caring for children.

This is in line with the research conducted by Sa'adah (2014) which shows that more students with normal nutritional status are 76 (63.3%) and only a small proportion with abnormal nutritional status are *stunting* of 9 students or 7.5% .

*Stunting* in elementary school children is a short manifestation of the time of toddler, where there is no improvement in growing chase and unmet nutrition in the long term. So that in the long run it has a negative effect, namely reducing cognitive abilities and learning achievement, decreasing immunity, and at the risk of various diseases (Ministry of Health, 2016).

The results showed that the percentage of children with low parental education in Kampung 11 SDN even in 2019 was 29.8% and the percentage of parents' education was high at 70.2%. The percentage of children who have highly educated parents will influence the way to educate and nurture parents to children.

This is in line with the research of Septiani (2012) which shows that more parents have higher levels of education, namely high mothers (high school equivalent) 56 (48.7%), middle level education (SMP) 26 (22.6%) and low education level ie (not graduating or graduating elementary school) 33 (28.7)%.

Parental education is one of the important factors that influence children's learning and growth performance. Parents who are highly educated receive more information from outside regarding ways to care, child health, education and so on (Sudargo, 2018).

Based on the results of the study, the percentage of children with parents working at SDN 11 Kampung, even in 2019, is 14.0% and the percentage of children who have parents who do not work is 86.0%. Mothers do not work will have more free time with children than working mothers. Mother's work is related to the availability of mother's time with her children.

This is in line with Septiani's study (2012) which states that the highest percentage of mothers is not working (61.7%). Housewives and mothers who work outside the home will influence parenting. Work that requires the mother to leave the house causes a lack of interaction between mother and child, this results in a lack of stimulation given to the child so that it can affect the growth process (Sudargo, 2018).

The results showed the percentage of children with income of poor parents in SDN 11 Kampung even in 2019 which was equal to 52.6% and the percentage of children who had income for parents who were not poor was 47.4%. Parental income can be used as an indicator of poor family or not. From the results of the analysis, parents' income for each family member tends to be lower than per capita income.

This is in line with Saniarto's (2012) study which states that the highest percentage is in the income of low parents (61.2%) and high income (38.8%). According to Sudargo (2018) the family economy affects children's development, family limitations in providing various play facilities cause the child's brain to get less stimulation and this hampers their development.

Based on the results of the study the percentage of children with large families in Kampung 11 SDN even in 2019 is equal to 63.2% and the percentage of children who have small families is 36.8%. Children who come from small families get more family attention than their parents, especially related to children's learning. The size of the family affects expenditure for education, the larger the family, the greater the costs incurred.

In addition, the number of families relates to meeting food needs. The size of the family is also related to the attention and affection of the mother in caring for the child and the concentration of the child when studying at home.

This is in line with the research of Mustamin (2013) which states that parents have a number of dependents to be funded by 3-4 children (40.90%), 5-6 children (22.50%) and 1-2 children (29 , 60%). In general, only children have higher achievement than children who have siblings. The child's achievement is related to the child's experience, depending on how many siblings and siblings and family situations. Middle children usually lack the motivation to excel compared to firstborn children, children who are spoiled and do not face many problems show high academic achievement (Mahmud, 2017).

Relationship *Stunting* with learning achievement in school children in SDN 11 Kampung Jua (Table 4) shows that the number of respondents who have low learning achievement is more common in respondents with normal status compared to *stunting*. Based on the statistical test, thevalue is *Sig* 0.146> 0.05, this result proves that height does not have an influence on learning achievement at SDN 11 Kampung Jua Padang.

Most of the samples have good learning achievements. Height based on age is one of the factors that influence learning achievement, but is not a major factor. There are still many other important factors that influence learning achievement such as the environment, how to learn children, learning facilities, stimulation and psychological children that can also affect learning achievement. In accordance with the theory there are many factors that influence learning achievement, both internal and external.

This research is in line with the research conducted by Idwan (2018) which suggested that there was no significant relationship betweenstatus *stunting* and learning achievement in school children at Mawasanga 1 Elementary School in Central Buton Regency (p = 0.694). It was found thatchildren are *stunting* not necessarily bad at their learning achievements and not all normal children get good achievements. This is because there are many factors that cause poor children's learning achievement including learning motivation, concentration of learning, approach and attention of parents.

The same thing was also found inresearch Gunawan's (2018) which stated that there was no difference in the mean of learning achievement between *stunting* and *non-stunting children* in the SDN Tikala District of Manado (p = 0.215). Learning achievement is not only achieved with optimal nutritional intake but there are other things that can affect learning achievement. Children who are *conserving* (apathetic) towards science tend to take a simple and not deep learning approach. In contrast to students who have high intelligence and are encouraged by their parents, they will choose a quality learning approach.

However, this is different from the results of a study conducted by Arfines (2017) which found that there was a relationship between *stunting* and learning achievement in slums, Central City of Central Jakarta. This difference in results can be caused by differences in the location of the

research conducted by Arfines (2012). In this study it involved locations slum with population density, locations near railroad lines and low environmental sanitation. This difference in location will indirectly relate to the social environment which affects learning activities in school children more in the community.

The impact of the shortening seen in children is a disruption of delay in motor development (Lamid, 2015). Physical conditions can influence the enthusiasm and intensity of students taking lessons (Syah, 2015). But there are still many other factors that influence learning achievement, such as socio-economic factors that have a profound effect on student learning achievement (Mahmud, 2017).

The relationship between parents' education and learning achievement in school children at SDN 11 Kampung Jua (Table 5) shows that the number of respondents who have low learning achievement is more prevalent among respondents with low parent education compared to high parents education. Based on the statistical test, thevalue *Sig* was 0.011 ($p$ <0.05), this result proved that the education of parents, ie mothers, had an influence on learning achievement at SDN 11 Kampung Jua Padang. The *odds ratio* maternal educationfor learning achievement is 6.3, meaning that if a mother with low education the child is at risk of having an achievement less 6.3 times than a mother who is highly educated.

A good parent education will direct children to good and directed learning habits so that it has an impact on children's learning achievement that increases. Parents who are highly educated can get greater material so that they can provide children's learning facilities and facilities. In addition to material benefits, parents who are highly educated have better knowledge in child care both in terms of health and education, are more open and able to treat children positively. From the results of the study, it appears that parents who are highly educated have greater attention to children's learning achievement than those with low education.

This is in line with the research conducted by Hasan's research (2014) which shows that there is a significant relationship between parental education and learning achievement. Relationship between mother's education and learning achievement ($p$ *value* = 0.001). Parental education has a relationship with parenting, stimulation and understanding of nutritional problems. Parents who are highly educated pay more attention to parenting, provide optimal stimulation and better understand nutritional problems.

The same thing was also found by Cholifah (2016) in class IV in SDN Sananwetan Subdistrict, Blitar City, indicating that there was a significant influence between parental education. Obtained R value of 0.676 by using a classic assumption of regression testing. Parental education can have an influence to improve student learning outcomes to be better.

Parents are the first educators for children, with different parents' educational backgrounds having an influence on how to guide children in learning. Parents who are highly educated are more open to receiving outside information about good ways to care for children, maintain children's health, education, and so on (Sudargo, 2018).

The relationship between the work of mothers and learning achievement in school children at SDN 11 Kampung Jua (Table 6) shows that the number of respondents who have low learning achievement is more common in respondents with mothers not working compared to working mothers. Based on the statistical test, the Sig value is 1,000> 0.05, this result proves that the work of the mother does not have an influence on learning achievement at SDN 11 Kampung Jua Padang.

Good children's learning achievement is not determined by the quantity of interaction between mother and child, but what needs to be considered is the quality of the interaction, how the mother's attention and discipline in educating children. Working mothers who are able to divide their time with children have better learning achievements and vice versa mothers who do not work but more often spend their time outside the home will have children with low learning achievement.

This research is in line with the research conducted by Septiani (2012) which suggested that there was no relationship between the employment status of mothers and learning achievement in school children in Cirine 2 Elementary School Depok (p = 0.516). Education implanted by parents at home is very important for the development of children, mothers do not work tend to have a lot of free time, especially to take care of the family. Parents have a big role as educators outside the home.

However, in the study it was found that working or not working mothers are not related to student learning achievement, another factor is the mother's education level has a relationship with learning achievement.

Work that requires the mother to leave the house causes a lack of interaction between mother and child, this results in a lack of stimulation given to the child so that it can affect the growth process (Sudargo, 2018).

The relationship of parents' income with learning achievement in children as in SDN 11 Kampung Jua (Table 7) shows that the number of respondents who have low learning achievement is more common in respondents with income categories of poor parents compared to the income of non-poor parents. Based on the statistical test obtainedvalue *Sig* of 0.006 <0.05, this result proves that the income of parents has an influence on learning achievement at SDN 11 Kampung Jua Padang.The *odds ratio* of parents' income to learning achievement is 13, meaning that if the income of parents is in the poor category then the child is at risk of 13 times having low learning achievement.

Most of the children from poor families tend to have low learning achievements compared to children from non-poor families. This is because families are more busy paying attention to the adequacy of their household needs than paying attention to their child's learning achievements and it is more difficult to meet the needs of learning facilities.

This research is in line with the research conducted by Hadiyanto (2014) which suggests that there is a significant relationship between parents' income and learning achievement in school children in 15 Surabaya High School with t-calculated parent income generated at 3.382 with a significant level of 0.001 less from 0.05. Parents with high income will try to meet the learning needs of children, so that what they want to get learning achievements can be achieved. Parents' income can provide encouragement and children will be more focused on learning because of adequate life and lack of fundamental pressure. High income parents pay more attention to learning achievement and children will not be troubled by school needs and other needs.

According to Sudargo (2018) the family economy affects children's development, family limitations in providing various play facilities cause the child's brain to get less stimulation and this hampers their development.

The relationship of the number of families with learning achievement in school children in SDN 11 Kampung Jua (Table 8) shows that the number of respondents who have low learning achievement is more common in respondents with large families compared to the number of small families. Based on the statistical test, thevalue *Sig* was 0.041 <0.05. This result proved that the number of families had an influence on learning achievement at SDN 11 Kampung Jua Padang. *The odds ratio of the* number of families to learning achievement is 7.6, meaning that the number of large families of children is at risk of 7.6 times having low learning achievement.

The number of large family members will affect the size of the family's dependents so that the allocation of funds for children's education is reduced which can have an impact on learning achievement which decreases. Children from a number of families get a little more attention from parents than a large number of families. Children from a small number of families have better learning achievements because of the environment and the number of family members that will influence children's learning abilities.

This is in line with the research conducted by Efnita (2018) in Mentawai students in Yogyakarta, which states that the number of family members influences learning achievement, interpreted that the regression coefficient is - 0.071 means that every 1 percent increase in siblings will have an impact on decreasing student achievement amounting to 0.07 percent ceteris paribus. The large number of family members results in a greater number of family dependents so that the allocation of funds for education is reduced and results in decreased learning achievement.

The same thing is also found inresearch Mustamin's(2013) which states that the number of family dependent children influences learning achievement. This is due to the increasing number of family members in a family, the more costs that must be prepared to meet their living needs, including the cost of education for their children. The size of household members will affect the level of consumption and fulfillment of their needs. When compared with the level of household income

with the size of the household members who are dependent, they will always be entangled with a life that is inadequate, so that there is poverty that continues for their lives. Parents and families more influence learning activities. The nature of parents, family management practices, family tension and family demographics impact both good and bad on learning outcomes (Shah, 2015).

**CONCLUSION**

1) The majority of respondents are 8 and 9 years old and male.
2) Most respondents have high learning achievements.
3) Most of the respondent's height is in the normal category.
4) Most respondents have high parents education, mothers do not work, come from poor families and large families.
5) There is no relationship between *stunting* and learning achievement at SDN 11 Kampung Jua Padang.
6) There is a relationship between parental education and learning achievement at SDN 11 Kampung Jua Padang. High parental education will generally have high children's learning achievements.
7) There is no relationship between the work of mothers and learning achievement at SDN 11 Kampung Jua Padang. Mothers who can share time to give attention to learning in children will contribute to good learning achievement.
8) There is a relationship between parents' income and learning achievement at SDN 11 Kampung Jua Padang. Children from non-poor families will generally be high achievers.
9) There is a relationship between the number of families and learning achievement at SDN 11 Kampung Jua Padang. Children from small families tend to have high learning achievements.

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# Factors Related To Implementation of Early Breastfeeding Initiation On Mother's Work Area Post Partum of Ikur Koto Health Center, In Padang City

**Desmiwarti[1], Sunesni[2], Finisha Erza Rizka[3]**

[1]*Departmen Obstetrich and Ginecology, RSUP DR. M. Djamil, Padang, Indonesia*
[2]*Health Polytecnic Mercu Bakti Jaya Padang, Indonesia*
[3]*Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
desmiwarti@gmail.com[1]

**Abstract**

Early Breastfeeding Initiation or *Inisiasi Menyusu Dini (IMD)* is a process of placing a baby in the mother's breast immediately after birth at least for one hour. The lowest IMD coverage in Padang City in 2016 was 75.90% in the Ikur Koto Health Center. The purpose of this study was to determine the factors associated with the implementation of Early Breastfeeding Initiation or *Inisiasi Menyusu Dini (IMD)* in mothers *postpartum* in the working area of the Ikur Koto Health Center in Padang City. This type of research is quantitative research with method *cross-sectional*. The sample of this study was mothers who gave birth to 0-6 months, as many as 77 people who met the inclusion criteria and the samples were taken using the *proportional stratified random sampling technique*. Data collection by filling out questionnaires. Data were analyzed by univariate, bivariate analysis using statistical tests *chi-square* (p-value ≤0.05), and multivariate analysis using simple logistic regression. The results of this study found 57.1% did not implement IMD. The factors that influenced it were found that knowledgeable mothers were lacking (62.3%), negative maternal attitudes (57.1%), supporting health workers (58.4%). The results of the bivariate showed that there was a relationship between the level of knowledge (p = 0.016), attitude (p = 0.043), and support of health workers (p = 0.000) with the implementation of IMD. Multivariate analysis showed that the dominant variable was the support of health workers

**Keywords** : Early initiation breastfeeding, knowledge, attitude, support of health worker

## INTRODUCTION

Early Breastfeeding Initiation (IMD) is the process of placing a newborn on the mother's chest or abdomen so that babies can naturally search for their own source of breast milk or breast milk and start breastfeeding. Babies will get colostrum found in the droplets of the mother's first ASI which is rich in immunity. IMD is beneficial for the mother because it can help speed up the postpartum recovery process. In the first hour of life, the baby is born into the world, the baby is certain to get the chance to do an IMD (Indonesian Ministry of Health, 2017). Based on the research of the Indonesian Pediatrician Association in 2011, it was found that most of the mothers had placed their babies on their breasts immediately after birth. But 87% of babies are only placed with a duration of fewer than 30 minutes, even though the right IMD must be done at least 1 hour or until the baby begins to suckle (IDAI, 2016).

Based on data released by the *United Nations of Children's Fund* (UNICEF) in 2010 that in Indonesia the infant mortality rate is still high at 22% of infant deaths worldwide. Whereas according to the results of the Indonesian Demographic and Health Survey (IDHS) in 2012, the Infant Mortality Rate (IMR) in 2012 was 32 per 1,000 live births. The reduction in infant and maternal mortality has become the main goal to achieve the goals of *SustainableDevelopment Goals* (SDGs) or 2030 Sustainable Development Goals. Infant mortality that occurs in the first month of birth can be prevented by giving the baby the opportunity to search for and suck breast milk on the mother's breast and allow maternal skin contact to the baby's skin in the first hour at the start life, then infant mortality and developmental disorders can be avoided.

The low implementation of Early Breastfeeding Initiation (IMD) in Indonesia is one of the causes of high infant morbidity and mortality. Based on Riskesdas (2013) data, breastfeeding infants

in less than one hour is 34.5%. For West Sumatra, breastfeeding in less than one hour is 44.2%. This shows that IMD has not been implemented well, because there is still a lack of knowledge of mothers about the importance of implementing IMD so that many mothers do not know and understand for certain about the implementation of IMD. This is also thought to be one of the reasons for maternal indifference to the importance of implementing the IMD during labor. Mothers care more about preparations before labor such as money and vehicles compared to implementing IMD.

Health workers play an important role in the success of the breastfeeding process, by giving counseling about breastfeeding since pregnancy, implementing Early Breastfeeding Initiation (IMD) at the time of delivery and supporting breastfeeding with 10 steps to the success of breastfeeding (JNPK-KR, 2014). The benefits of implementing IMD are that the baby will naturally get warmth from the skin contact of the mother with the baby's skin. Babies are left to look for their own mother's milk nipples. The pounding of the baby's head into the mother's chest, the touch of the baby's hand on the mother's nipple, the baby's emission and licking on the mother's nipples can stimulate the oxytocin hormone which causes the uterus to contract and stimulate the removal of the placenta (Roesli, 2012).

According to the WHO in 2017 contact between mother's skin and baby's skin immediately after birth at IMD will increase the likelihood of exclusive breastfeeding for one to six months of life. This is similar to Selvia Putri Sari's research regarding the relationship between the implementation of Early Breastfeeding Initiation (IMD) and breastfeedingexclusively for six months and other factors affecting the working area of the Alai City Padang Health Center in 2017 stated that the implementation of IMD would have a 22.3-fold chance of exclusive breastfeeding.

According to Lawrence Green's theory in Notoatmodjo (2007) that human behavior is influenced by 3 factors namely predisposing factors such as knowledge, attitudes, beliefs, values beliefs, supporting factors such as health facilities or facilities, and motivating factors such as attitudes and behavior of health workers. According to the theory above, the behavior in implementing the IMD is influenced by the mother's knowledge, mother's attitude, and the support of health workers.

Knowledge is the result of knowing, and this happens after people have sensed a particular object (Notoatmodjo, 2012). Attitude is a reaction or response that is still closed from someone to a stimulus or object (Notoatmodjo, 2012). Support is an effort given to others, both morally and materially to motivate these people in carrying out activities (Setyowati, 2007). The success or failure of the IMD at the place of maternity services depends on health workers such as midwives and doctors. The first midwife has a role in helping maternal mothers give breast milk to their babies by doing early breastfeeding (Bahiyatun, 2008).

A preliminary study conducted by researchers on 10 postpartum mothers in the working area of the Ikur Koto Health Center in Padang City, found that 8 postpartum mothers did not know about early breastfeeding initiation so that this affected the postpartum maternal attitude towards IMD implementation. IMD problems occur in the working area of Ikur Koto Health Center, influenced by several factors, namely lack of knowledge of mothers and lack of information from health workers.

## METHOD

This research is a quantitative study with a *cross sectional* design. The sample of this study was 77 women who gave birth to 0-6 months who met the inclusion criteria and the samples were taken using the *proportional stratified random sampling technique*. Data collection by questionnaire. Data were analyzed by univariate, bivariate analysis using *Chi-Square* (*p-value* $\leq$0.05) and multivariate analysis using logistic regression.

## RESULT

### Univariate Analysis

**Table 1. Distribution of Frequency Characteristics of Respondents**

| Characteristics | f | % |
|---|---|---|
| **Age** | | |
| - 20 - 35 years35 years | 65 | 84.4 |
| - <20 years or> | 12 | 15.6 |
| **Education** | | |
| - Elementary | 4 | 5.2 |
| - Junior | 5 | 6.5 |
| High SchoolSchool / | 44 | 57.1 |
| Vocational School | 24 | 31.2 |
| - Senior High- College | | |
| **Employment** | | |
| - Working | 15 | 19.5 |
| - Not working | 62 | 80.5 |

Based on table 1 above shows that most (84.4%) respondents aged 20-35 years and most ( 57.1%) respondents were last educated high school / vocational school. Most (80.5%) respondents do not work or as housewives.

**Table 2. Distribution of Frequency of Early Breastfeeding Initiation (IMD) Implementation**

| Implementation of Early Breastfeeding Initiation (IMD) | f | % |
|---|---|---|
| IMD | 33 | 42.9 |
| No IMD | 44 | 57.1 |
| **Total** | **77** | **100.0** |

Based on table 2 above it can be seen that from 77 respondents some respondents (57.1%) did not carry out Early Breastfeeding Initiation (IMD )

**Table 3. Distribution of Frequency Mother's Knowledge**

| of Knowledge | f | % |
|---|---|---|
| Good | 29 | 37.7 |
| Less | 48 | 62.3 |
| **Total** | **77** | **100.0** |

Based on table 3 above it can be seen that out of 77 respondents, showed more than a majority (62.3%) mothers had knowledge lacking regarding the implementation of Early Breastfeeding Initiation (IMD).

**Table 4. Distribution of Frequency Mother's Attitude**

| Attitudes | f | % |
|---|---|---|
| Positive | 33 | 42.9 |
| Negative | 44 | 57.1 |
| **Total** | **77** | **100.0** |

Based on table 4 above it can be seen that from 77 respondents, it was found that some (57.1%) mothers had negative attitudes towards implementation of Early Breastfeeding Initiation (IMD).

**Table 5. Distribution of Frequency Health Worker**

| SupportHealth Worker | f | % |
|---|---|---|
| Supports | 45 | 58.4 |
| Less Supporting | 32 | 41.6 |
| **Total** | **77** | **100.0** |

Based on table 5 above, it can be seen that from 77 respondents, the results were mostly (58.4%) the mother received support from health workers regarding the implementation of Early Breastfeeding Initiation (IMD).

**Bivariate Analysis**

**Table 6. The Relationship Mother Knowledge with Implementation of Early Initiation of Breastfeeding (IMD)**

| Knowledge | ImplementingIMD | | | | | | *p-value* |
|---|---|---|---|---|---|---|---|
| | IMD | | NotIMD | | Total | | |
| | f | % | f | % | f | % | |
| Good | 18 | 62.1 | 11 | 37.9 | 29 | 100 | 0,016 |
| Less | 15 | 31.3 | 33 | 68.8 | 48 | 100 | |

Based on table 6 above, it can be seen that from 77 respondents, the results of 48 respondents who were knowledgeable were more than half (68.8%) did not carry out the Early Breastfeeding Initiation (IMD). While 29 respondents who were well-informed, (37.9%) did not implement IMD. Based on the statistical test obtained *p-value*<0.05 (p = 0.016), meaning that there is a relationship between the knowledge of mothers and the implementation of Early Breastfeeding Initiation (IMD) in the working area of Padang City Ikur Koto Health Center.

**Table 7. The Relationship Attitude Mother with Implementation of Early Initiation of Breastfeeding (IMD)**

| attitude | ImplementationIMD | | | | | | *p-value* |
|---|---|---|---|---|---|---|---|
| | IMD | | IMDphoto | | Total | | |
| | f | % | f | % | f | % | |
| Positive | 19 | 57.6 | 14 | 42.4 | 33 | 100 | 0.043 |
| Negative | 14 | 31.8 | 30 | 68, 2 | 44 | 100 | |

Based on table 7 above, it can be seen that of the 77 respondents, 44 respondents who had negative attitudes were more than half (68.2%) did not carry out the Early Breastfeeding Initiation (IMD). While 33 respondents who had a positive attitude (42.4%) did not carry out Early Breastfeeding Initiation (IMD). Based on the statistical test obtained *p-value*<0.05 (p = 0.043), meaning that there is a significant relationship between the attitude of the mother and the implementation of Early Breastfeeding Initiation (IMD) in the working area of Padang City Ikur Koto Health Center.

**Table 8. The Relationship between Health Worker Support with Implementation of InitiationEarly Breastfeeding (IMD)**

| Health Personnel Support | Implementation of IMD | | | | | | *p-value* |
|---|---|---|---|---|---|---|---|
| | IMD | | IMD photo | | Total | | |
| | f | % | F | % | f | % | |
| **Support** | 28 | 62.2 | 17 | 37.8 | 45 | 100 | 0,000 |
| **Less Supports** | 5 | 15.6 | 27 | 84.4 | 32 | 100 | |

Based on Table 8 above, it can be seen that from 77 respondents, it was found that 45 respondents who received support from health workers more than half (62.2%) carried out Early Breastfeeding Initiation (IMD). While 32 respondents who received less support from health workers (15.6%) implemented IMD. Based on the statistical test obtained *p-value*<0.05 (p = 0,000), meaning that there is a relationship between the support of health workers with the

implementation of Early Breastfeeding Initiation (IMD) in the working area of Padang City Ikur Koto Health Center.

**Table 9. Late Model Multivariate Analysis and Variables Most Affecting Implementation of Early Initiation of Breastfeeding (IMD)**

| Variable | *p-value* | OR | 95% CI | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Attitude | 0,040 | 3,290 | 1,057 | 10,240 |
| Health Workers Support | 0,000 | 9,450 | 2.797 | 31.922 |
| Knowledge | 0.058 | 2.994 | 0.963 | 9.309 |

Based on table 9 results Multivariate analysis and final modeling, the most dominant factor influencing the implementation of Early Breastfeeding Initiation (IMD) is the one with the highest OR value, namely the support of health workers with an OR value of 9,450 and a *p-value* =0,000. This means that mothers who get support from health workers are 9 times more likely to carry out Early Breastfeeding Initiation (IMD) than mothers who do not get support from health workers.

## DISCUSSION

### Univariate Analysis of Early Breastfeeding Initiation (IMD) Implementation

Based on the results of research conducted, it shows that from 77 respondents, some respondents (57.1%) in the Ikur Koto Community Health Center work area did not carry out Early Breastfeeding Initiation (IMD), while 42 respondents implemented IMD, 9%. The results of this study are in line with the research of Selvia Putri Sari (2017) in the work area of Alai Health Center in Padang City, where most (79.4%) respondents did not implement IMD, while respondents who implemented IMD were 20.6%.The low implementation of IMD in the Selvia study was due to a large number of mothers who did not understand how the IMD was implemented and the health workers who did not implement the IMD according to the standards.

The low implementation of IMD is because many mothers do not know what IMD is and also how the IMD is implemented. The mother only found out after the researcher explained the term known by respondents in the Ikur Koto Community Health Center working area on Early Breastfeeding Initiation (IMD).

Early Breastfeeding Initiation (IMD) is the process of putting the baby on his stomach on the mother's chest or abdomen so that the baby's skin is attached to the mother's skin which is carried out at least one hour immediately after birth or until the baby finds the milk puttig and begins to suckle. If the process is blocked by cloth or done in less than one hour, it is considered imperfect and does not do IMD (Ministry of Health, 2016). The benefits of IMD are that the baby will get natural warmth from the mother's skin attached to the baby's skin. Babies are left to look for mother's milk nipples. Babies will make movements such as kicking the mother's stomach which serves to stimulate the release of the hormone oxytocin which causes the uterus to contract so as to stimulate the removal of the placenta and reduce bleeding in the mother after childbirth (Roesli, 2012).

IMD has an important meaning in stimulating milk production and strengthening the sucking reflex in infants. The initial sucking reflex in the baby is strongest in the first few hours after birth. If the initial breastfeeding does not occur and the baby does not continue to suck the mother's nipples, the breast will lose the ability to produce milk in one week or more. According to JNPK-KR in 2017, it was suggested that by giving an opportunity for IMD for both mother and baby, it would benefit the mother to stimulate the production of the hormone oxytocin and prolactin, help uterine contractions, reduce the risk of bleeding, stimulate the release of colostrum and milk production, helping the mother deal with stress feel calm and painless when the placenta is born. For babies, reduce 22% of deaths of 28-day-old babies down, prevent heat loss in infants, strengthen baby sucking reflexes, and increase the success of exclusive breastfeeding.

It can be concluded, there are still many respondents who do not know the understanding, benefits, and steps of the IMD implementation process that is not implemented properly. This is due to a lack of knowledge of the mother and family, lack of information and counseling about the importance of the benefits of implementing IMD by health workers, and the incompatibility of IMD implementation times which are less than 60 minutes.

**Mother's Knowledge**

Based on the results of the research conducted, it shows that out of 77 respondents, it was found that more than half (62.3%) of mothers had insufficient knowledge about the implementation of Early Breastfeeding Initiation (IMD). This is in line with the research of Anita Kusumawati (2010) in the RB of Harapan Bunda Pajang Surakarta, which shows that mothers have less than 7 people (14%) and all do not practice IMD. This research is also in line with the research conducted by Yuni Rahmawati (2015) at RB An Nuur Surakarta, where as many as 11.76% of respondents had good knowledge, 73.53% of knowledge was sufficient, 14.71% of knowledge was lacking. The low level of knowledge of mothers in Yuni Rahmawati's research occurred because respondents who were less active in seeking information about IMD, and also based on factors of education and less experience.

Knowledge is the result of "knowing" and this happens after someone has sensed a certain object. Sensing occurs through the senses, namely vision, hearing, smell, taste, and touch. Most human knowledge is obtained through the eyes and ears (Notoatmodjo, 2012). Lack of knowledge from parents who feel sorry and do not believe a newborn baby can find his mother's own nipples. Or mothers who are embarrassed to ask health workers who assist in childbirth to do IMD (Roesli, 2012).

According to Mubarak (2007), the factors that influence the level of one's knowledge are education, work, age, interests, experience, cultural environment, and information. Education is needed to obtain adequate information so that it can improve the quality of life. The higher the education of someone, the easier it is to receive information. The work environment can also make someone gain experience and knowledge both directly and indirectly. In addition, knowledge will be formed because of the experience of the respondents and the amount of information obtained. Access to information is also an important thing to get knowledge because the average community has used mobile phones with adequate facilities to access the internet and get all kinds of information.

In this study, there are still many respondents who have low knowledge about IMD, this is evident from the answers given by respondents in answering the questionnaire. Where more than half of the respondents answered incorrectly in a number of questions asked about IMD, such as mothers did not know the abbreviation of IMD, did not know the purpose of IMD, did not know how long it would take to suckle first after the baby was born and did not know the position of the head baby during the early breastfeeding initiation process.

The results of this study indicate that there is still a low level of knowledge held by respondents about the implementation of IMD. Judging from the age of respondents (84.4%) aged 20-35 years, the education level of respondents more than half (57.1%) of respondents had high school / vocational education, and the respondent's work was greater (80.5%) respondents did not work. This study also illustrates that respondents' education is low so their knowledge is also lower. Knowledge will be formed because of the experience and the amount of information obtained. There are still many respondents who lack knowledge due to lack of information obtained, lack of socialization during prenatal care and lack of interest from respondents to seek or add information about the understanding, benefits, and process of implementing the IMD.

**Mother’s Attitude**

Based on the results of the research conducted showed that from 77 respondents, it was found that some (57.1%) mothers had negative attitudes. The results of this study are in line with the research of Fifi Indramukti (2012) in the Blado I Health Center work area, where the results of the

study showed more than half (57.3%) of respondents had a negative attitude towards the implementation of IMD.

Attitude is a reaction or response that is still closed from someone to a stimulus or object. According to Newcomb, a social psychologist stated that attitude is readiness or willingness to act, not an implementation of certain motives. Attitude is not yet an action or activity, but it is a predisposition to the behavior of a behavior. Attitude is still a closed reaction, not an open reaction or open behavior. Attitude is the readiness to react to objects in a particular environment as an appreciation of objects (Notoatmodjo, 2012).

In this study, it was seen that the respondent's attitude was negative. A person's attitude will be formed as a result of the response of a particular object, so if the mother has good knowledge about the implementation of the IMD it will be responded positively and vice versa if the mother who has less knowledge about the implementation of IMD will tend to give a negative response. The low attitude of respondents towards the implementation of IMD is caused by the knowledge possessed by respondents is still lacking, this is also related to the education of respondents (57.1%) with high school / vocational education. In terms of the age of the young (84.4%) respondents aged 20-35 years and the work of respondents (80.5%) who do not work or as housewives are one reason for the low level of knowledge and attitudes of respondents to find out or get information about IMD during pregnancy checks to health workers. For this reason, socialization and counseling or home visits need to be increased to mothers so that their knowledge and understanding develop so that they will give a positive response to the implementation of the IMD.

**Health Worker Support**

Based on the results of the research conducted, it was found that out of 77 respondents, the majority (58.4%) of mothers obtained support from health workers. The results of this study are in line with the study of Eko Heryanto (2016), where respondents who stated health workers supported the implementation of IMD as many as 51 (61.4%).

According to Law No. 36 of 2014 concerning Health Workers, health workers are all people who are devoted to the health sector and possess the knowledge and skills acquired at their education level and require authority in carrying out health efforts. Health workers have an important role in increasing awareness, willingness and ability to live healthy lives in society. According to Solihah in Tarigan about the knowledge, attitudes, and behavior of mothers of infants on exclusive breastfeeding (2012), states the determining factors for Early Breastfeeding Initiation (IMD) are birth attendants or health workers.

The role of health workers in IMD is very important because mothers need help and facilities from health workers to be able to do IMD. This is because the better an officer in conveying the intent, purpose, benefits, and disadvantages of implementing the IMD, the better the results will be achieved. This support should be carried out during prenatal or post natal because this is believed to be very effective in encouraging mothers to do IMD and increase the likelihood of exclusive breastfeeding. But often health workers do not facilitate mothers to implement IMD, for this reason, it is necessary for health workers to be given adequate training in IMD, and to provide facilities that are also adequate to socialize to the community so that what has been targeted will be achieved.

At the time of the study found a number of cases investigated by researchers against several respondents who stated that health workers did not explain to the mother how the IMD implementation process, officers did not tell how long it would take for IMD. There were several other factors that caused the implementation of the IMD not to be carried out, such as the mother's husband did not accompany the mother during labor, the mother's husband did not support giving breast milk to the baby. For this reason, it is necessary to provide information on the importance of implementing the IMD for husbands or families of mothers who will face labor when conducting antenatal care visits at local health facilities.

If the health worker does not want to do it, the IMD process will not work. Implementation of IMD must be performed in all deliveries. Respondents who implemented IMD through normal delivery and were assisted by health workers who had been exposed and had participated in APN training to implement IMD (Roesli, 2008).

The support of health workers plays an important role to support the success of breastfeeding and can help mothers give birth to early breastfeeding or IMD. Information provided by health workers begins during pregnancy, information communication, and education is very important in disseminating information about IMD, because it can deliver the right information to the target, it can also form a positive opinion about the IMD so that mothers and families want to implement the IMD. During the implementation of the IMD, the support provided by health workers can also arouse the mother's confidence to make a decision to breastfeed her baby so that the mother has physical and psychological readiness to do the IMD.

Motivation and support can be provided by health workers to mothers to support the implementation of the IMD such as allowing babies with their mothers after childbirth in the first few hours, teaching mothers how to care for breasts, and midwives can help to breastfeed mothers immediately within the first hour after giving birth.

**Bivariate Analysis**

**The Relationship between Mother's Knowledge and the Implementation of Early Breastfeeding Initiation (IMD)**

Based on the results of the research conducted it can be seen that from 77 respondents, the results of 48 respondents with knowledge of more than half (68.8%) did not implement Early Breastfeeding Initiation (IMD). While 29 respondents who were well-informed (37.9%) did not implement IMD. Based on the statistical test obtained *p-value*<0.05 (p = 0.016), meaning that there is a relationship between the knowledge of mothers and the implementation of Early Breastfeeding Initiation (IMD) in the working area of Padang City Ikur Koto Health Center. From the results of the analysis of this study, the level of good knowledge is 3,600 times the chance to carry out Early Breastfeeding Initiation (IMD).

The results of this study are also in line with the research of Nofria (2014) in the work area of Bungus Health Center, which explained that there was a significant relationship between the level of knowledge of post partum mothers and the implementation of IMD (*p-value* = 0.001). In the Nofria study, the low level of knowledge has a significant effect, namely the higher the level of knowledge of the mother, the greater the likelihood of implementing the IMD, whereas the lower the level of knowledge the mother has, the less implementation of IMD.

The low implementation of IMD is because many mothers do not know what IMD is and also how the IMD is implemented. The mother only found out after the researcher explained the term known by respondents in the Ikur Koto Community Health Center working area on Early Breastfeeding Initiation (IMD). In the study, the mother did not see when the newborn was drained and the baby only received an IMD in less than 60 minutes and was immediately separated from the mother. The process of implementing IMD is carried out for at least one hour, the baby will get many benefits, such as the baby will get natural warmth from the baby's skin attached to the mother's skin. Skin contact between mother and baby's skin will reduce 22% of neonatal deaths because it is useful as a thermoregulator that prevents hypothermia in infants (Roesli, 2012).

At the time of IMD, the baby will pass through five stages of behavior before successfully breastfeeding. In the first 30 minutes, the baby is silent. Then the baby will make a sound, kiss, and feel the amniotic fluid in his hand. After that, the baby will move towards the breast, find the nipple, and start feeding. Babies will get colostrum from the first ASI, which is an immune-rich liquid for intestinal growth so that it can protect babies from infectious diseases and allergic diseases. Early suckling babies will also be more successful in breastfeeding exclusively and maintain breastfeeding until the age of 2 years (Ministry of Health, 2014).

There are still many IMD implementation processes that are not carried out correctly and correctly because the respondents did not get information and knowledge about the implementation of the IMD. Mothers also do not know the benefits, processes, and time in implementing IMD.

Thus, it can be concluded that there are still many respondents who have insufficient knowledge due to lack of socialization from health workers and a lack of interest from the respondents themselves to find out or add information about the understanding, benefits, time and process of implementing the IMD.

**The Relationship between Mother's Attitudes and the Implementation of Early Breastfeeding Initiation (IMD)**

Based on the results of the research conducted, it can be seen that from 77 respondents, 44 respondents who had a negative attitude were more than half (68.2%) did not implement Early Breastfeeding Initiation (IMD). While 33 respondents who had a positive attitude (42.4%) did not carry out Early Breastfeeding Initiation (IMD). Based on the statistical test obtained *p-value*<0.05 (p = 0.043), meaning that there is a significant relationship between the attitude of the mother and the implementation of Early Breastfeeding Initiation (IMD) in the working area of Padang City Ikur Koto Health Center. From the results of the analysis of this study, mothers with positive attitudes were 2.908 times more likely to carry out Early Breastfeeding Initiation (IMD).

The results of this study are also in line with Devi Anggraeni Rusada's research, Sartiah Yusran, Nur Nashriana Jufri (2016) at the Poasia Health Center in Kendari City, which explains that there is a significant relationship between the attitude of mothers and the implementation of IMD (*p-value* = 0,000). In Devi's research, there are still some respondents who have a bad attitude towards the implementation of IMD. This causes most mothers to have a negative attitude due to lack of maternal knowledge related to IMD so that it has an impact on the attitude and implementation of IMD.

The attitude of respondents who were unfavorable towards the implementation of the IMD was due to the lack of knowledge of the respondents about the understanding, benefits, and implementation of IMD so that mothers tended to give poor responses to the implementation of IMD. If the mother's knowledge is good about IMD, the mother will be happy and want to do an IMD. The awareness to do IMD will make the process of implementing the IMD run smoothly so that the baby will be able to search for nipples properly and the breastfeeding process will also work well. For this reason, socialization and counseling need to be improved to mothers so that their knowledge and understanding develop so that they will give a positive response to the implementation of the IMD.

**The Relationship between Health Worker Support and the Implementation of Early Breastfeeding Initiation (IMD)**

Based on the results of the research conducted, it can be seen that from 77 respondents, 45 respondents obtained support from health workers more than half (62.2%) carried out Early Breastfeeding Initiation (IMD). While 32 respondents who received less support from health workers (15.6%) implemented IMD. Based on the statistical test obtained *p-value*<0.05 (p = 0,000), meaning that there is a relationship between the support of health workers with the implementation of Early Breastfeeding Initiation (IMD) in the working area of Padang City Ikur Koto Health Center. From the results of the analysis of this study, the support of health workers has an opportunity of 8,894 times to carry out Early Breastfeeding Initiation (IMD).

The results of this study are also in line with the research of Novita Rudiyanti (2013) in the working area of Titiwangi Health Center in South Lampung Regency, which explained that there was a significant relationship between the behavior of midwives and the implementation of IMD (*p-value* = 0,000). Mothers who received support from midwives had an opportunity of 28,350 IMD compared to mothers who did not receive midwife support.

The role of health workers in implementing IMD greatly determines the success of implementing IMD. Health workers who understand the importance of implementing IMD for mothers and babies can provide good understanding and direction to mothers who do not understand the meaning of IMD. So that the better the support of these health workers the possibility of implementing IMD will be greater and meet the targets to be achieved in its implementation.

All mothers who have the support of health workers to start breastfeeding as soon as possible after birth or within the first hour after giving birth will increase the mother's confidence to help implement IMD and reduce the risk of neonatal death and improve the survival of the baby. Motivation and support can be provided by health workers to mothers to support the implementation of the IMD such as allowing babies with their mothers after childbirth in the first few hours, teaching

mothers how to care for breasts, and midwives can help to breastfeed mothers immediately within the first hour after giving birth.

**Multivariate Analysis**

Based on the results of multivariate tests that have been conducted it was found that the variable support for health workers is the most dominant variable that influences the implementation of Early Breastfeeding Initiation (IMD). The results were obtained *p-value*= 0,000 and OR = 9,450, meaning that mothers who received support from health workers were 9 times more likely to carry out Early Breastfeeding Initiation (IMD) than mothers who did not get support from health workers.

In the phase I logistic regression the variables released from the analysis are the knowledge variables must be put back into modeling because it causes changes in the value of OR> 10%, so it is known that the knowledge variable is a *counfounder*.

## CONCLUSION

1) Most respondents did not implement the Early Breastfeeding Initiation (IMD) in the working area of the Padang City Ikur Koto Health Center.
2) Most of the respondents had insufficient knowledge of the implementation of Early Breastfeeding Initiation (IMD) in the working area of the Padang City Ikur Koto Health Center.
3) Most of the respondents had a negative attitude towards the implementation of the Early Breastfeeding Initiation (IMD) in the working area of the Padang City Ikur Koto Health Center.
4) Most respondents received support from health workers for the implementation of Early Breastfeeding Initiation (IMD) in the working area of the Padang City Ikur Koto Health Center.
5) There is a relationship between the knowledge of mothers and the implementation of the Early Breastfeeding Initiation (IMD) in the working area of the Padang City Ikur Koto Health Center.
6) There is a relationship between the attitude of the mother and the implementation of the Early Breastfeeding Initiation (IMD) in the working area of the Padang City Ikur Koto Health Center.
7) There is a relationship between the support of health workers and the implementation of the Early Breastfeeding Initiation (IMD) in the working area of the Padang City Ikur Koto Health Center.
8) The most dominant variable of support for health personnel influences the implementation of Early Breastfeeding Initiation (IMD) in the working area of the Padang City Ikur Koto Health Center.

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# THE EFFECT OF PREMARITAL EDUCATION ON READINESS FOR THE FIRST PREGNANCY OF BRIDES IN RELIGIOUS AFFAIRS OFFICE LUBUK BEGALUNG, PADANG

**Yulizawati[1], Rauza Sukma Rita[2],Indriani[3]**

*[1] Bachelor Of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
*[2]Biochemistry Section Faculty Of Medicine Universitas Andalas, Proklamasi Kemerdekaan street no. 94 Padang City, 25127, Indonesia*
*[3]Bachelor Of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
yulizawati@med.unand.ac.id[1]

**Abstract**

First pregnancy is a transition period for every woman. Pregnancy preparations must be done during the preconception period. If women are not ready to face pregnancy can cause anxiety and worry so, it can interfere with the pregnancy process. The purpose of this study was to know at the effect of *premarital education* on the readiness to face the first pregnancy for brides in Religious Affairs Office (KUA) Lubuk Begalung , Padang.

Type of this research is *pre-experiment* using *one group pretest posttest designs.* Data collection was conducted from April to May 2019. The population in this study were 72 registered brides in April 2019 at KUA Lubuk Begalung. Sampling uses the total sampling method. Data processing is done by *Paired sample T-Test* ($p < 0.005$) and *Chi-Square Test* ($p < 0.005$).

The results showed that before being given *premarital education* 46.9% of respondents were not ready to face the first pregnancy while after being given *premarital education* 95.9% were ready to face the first pregnancy. The results of *Paired sample T-Test* and *Chi-Square test results* obtained p-*value* = 0.001.

There is the influence of premarital education on the readiness of prospective brides to face the first pregnancy in Religious Affairs Office (KUA) Lubuk Begalung , Padang. It is expected that health workers will more optimally provide information about pregnancy readiness

**Keywords** : *Premarital Education*, Readiness, First Pregnancy

## INTRODUCTION

Pregnancy is a time of transition for every woman, namely a period between life before having children and life later after the child is born (Varney, 2004). The first pregnancy that every woman will go through after marriage will bring social change and psychological changes in her life. Some of them are happy to face the first pregnancy and others are known to experience anxiety. This depends on how a woman prepares the pregnancy so that she can adapt to any changes that occur during the pregnancy process (Newman, 2006).

If married women who are not ready to face pregnancy can cause anxiety and worry, there will be an increase in adrenal hormones which will adversely affect fetal development and *outcomes* later childbirth, namely post partum depression and increased rates of child violence (Rokhanawati, 2017). Increasing morbidity and mortality rates in mothers and infants can also be caused by a lack of preparation of knowledge about pregnancy, sexual intercourse, and childbirth (Stephenson J, *et al*, 2014).

Recorded maternal mortality (MMR) in Indonesia is the highest in ASEAN at 359 per 100,000 live births this number has not yet reached the target of the 2015-2019 National Medium

Term Development Plan (RPJMN). The MMR target per 100,000 live births in 2019 is 306 cases (SDKI, 2012; RPJMN, 2015-2019).

In 2017 the number of maternal deaths in West Sumatra was 115 cases. The maternal mortality rate in Padang City in 2017 was 16 cases. There are 5 cases in Lubuk Begalung Subdistrict, 3 cases in Koto Tangah Subdistrict, 2 in Nanggalo District and Pauh District, 1 in Padang Timur Sub-District, Kuranji, Lubuk Kilangan and Bungus Districts. For 2017 the causes of maternal deaths were 6 cases of preeclampsia, 5 cases of bleeding, 1 bronchial asthma, 1 case of sepsis, 1 case of carcinoma recti, and 1 case of hyperemesis gravidarum (Dinkes Kota Padang, 2018).

One effort to reduce maternal mortality was increasing knowledge and changing behavior of both mothers, families and communities (Riskesdas, 2013). Midwives as professionals who are close to women are responsible for providing knowledge, support, care and advice to women before and during pregnancy (Yulizawati et al, 2019).

The Indonesian government has facilitated brides to increase their knowledge before marriage, namely through *premarital education.* program *Premarital education* is a program that aims to prepare the bride and groom in the face of life after marriage and prepare for pregnancy. Guided by the Director General Regulation of the Indonesian Islamic Society Number 379 of 2018 concerning instructions for conducting premarital marriage guidance for brides and grooms, the material to be given includes exposure to marriage guidance policies, preparing family welfare, building relationships in families, meeting family needs, maintaining reproductive health and preparing qualified generation who can work with health agencies such as local health centers.

According to Suprastowo (2018), women often feel confused during the first pregnancy and have difficulty running their roles as mothers. The results obtained 72.7% of respondents said they needed pregnancy planning counseling and information on pregnancy care

Lubuk Begalung is recorded as the sub-district with the highest Maternal Mortality Rate (MMR) in Padang City in 2017. According to the Ministry of Religion of West Sumatra, Lubuk Begalung is the third most married sub-district in Padang, which is more than 1500 events each year. From the initial survey conducted in KUA, Lubuk Begalung, Padang through direct interviews with the head of the district, there was no specific counseling provided by health workers about the readiness to face the bride and groom. The researcher also conducted direct interviews with 10 brides, 8 people said they wanted to have children soon after marriage, 6 people said they were afraid and anxious if they imagined pregnancy, 5 people said they did not know what to prepare for the first pregnancy, 2 people wanted to delay pregnancy for work reasons.

Based on the problems described above, the authors are interested in conducting a study on "The Effects of *Premarital Education* on Preparedness for Facing First Pregnancy in Prospective Brides in KUA, Lubuk Begalung , Padang ".

**Method**

Type of this research used the *pre-experiment* using *one group pretest posttest designs* (Sugiyono, 2017). The population in this study is the bride and groom registered in April 2019 in KUA Lubuk Begalung, which is 72 people. The sampling technique in this study was carried out by the Total Sampling method. The research will be conducted in KUA Lubuk Begalung, Padang. Preparation and Research was conducted in December 2018 - June 2019. Data analysis was univariate and bivariate withanalysis *chi-square* and *Paired Sample T-Test.*

**Results**

This study were done in April-May 2019. The sample studied amounted to 58 respondents, but because 9 responden did not follow the *posttest* , the final number of samples was 49 respondents

**Table 1. Distribution of Frequency Characteristics of Respondents**

| No | Characteristics | f (n = 49) | % |
|---|---|---|---|
| **1** | **Age** | | |
| | <20 years | 9 | 18.4 |
| | 20-25 years | 28 | 57,1 |
| | 26-30 years | 12 | 24,5 |
| | > 30 years | 0 | 0 |
| **2** | **Education** | | |
| | No school / not graduated | 0 | 0 |
| | Elementary School | 7 | 14.3 Middle |
| | School | 4 | 8.2 |
| | High School | 28 | 57.1 |
| | PT | 10 | 20.4 |
| **3** | **Employment** | | |
| | IRT | 27 | 55.1 |
| | Trade | 10 | 20.4 |
| | Private | 11 | 22.4 |
| | PNS | 1 | 2.0 |
| **4** | **Income Husband** | | |
| | <2,500,000 | 12 | 24,5 |
| | ≥ 2,500,000 | 37 | 75,5 |
| **5** | **Wife Income** | | |
| | None | 27 | 55,1 |
| | <2,500,000 | 4 | 8.2 |
| | ≥ 2,500,000 | 18 | 36,7 |

Based on table 1 it is known that most brides are in the 20-25 year age group, 57.1%. The last education was the highest number of respondents, namely at the high school level / equal to 57.1%. The majority of prospective brides will work as housewives as much as 55.1%. The highest income of prospective husbands is in the range of 002,500,000 which is 75.5% and prospective wives do not earn as much as 55.1%.

**Univariate Analysis**

**Table 2 Distribution of Prospective Readiness for Facing The First Pregnancy Before and After *Premarital Education***

| Preparedness for Pregnancy | *Respondent Group* | | | |
|---|---|---|---|---|
| | ***Before*** | | ***After*** | |
| | **f** | **%** | **f** | **%** |
| Unready | 23 | 46.9 | 2 | 4.1 |
| Ready | 26 | 53,1 | 47 | 95,9 |
| **Total** | 49 | 100 | 49 | 100 |

Table 2 shows that before being given *premarital education* 46.9% of respondents were unprepared for the first pregnancy while after being given *premarital education* 95.9% were ready to face the first pregnancy and only 4.1% were unprepared. This shows that after being given *premarital education it* can increase the readiness of the brides to face the first pregnancy.

**Table 3 Categories of Readiness for Brides in the First Pregnancy Before *Premarital Education***

| **Preparedness for Facing pregnancy** | **General** | | **readiness Physical** | | **Psychological Readiness** | | **Social and financial readiness** | |
|---|---|---|---|---|---|---|---|---|
| | **f** | **%** | **F** | **%** | **f** | **%** | **f** | **%** |
| Unready | 26 | 53,1 | 19 | 38,8 | 33 | 67,3 | 18 | 36.7 |
| Ready | 23 | 46.9 | 30 | 61.2 | 16 | 32.7 | 31 | 63.3 |
| **Total** | **49** | **100** | **49** | **100** | **49** | **100** | **49** | **100** |

Based on table 3 before being given *premarital education it was* found that 53.1% were not ready in terms of general readiness and 46.9% are said to be ready. Physical readiness of the bride in the face of the first pregnancy before being given *premarital education*, namely 61.2% was ready to face the first pregnancy and 38.8% were not ready. The psychological readiness of the bride before being given *premarital education* from table 3 shows that 32.7% of respondents were ready to face the first pregnancy and 67.3% were unprepared. Social and financial readiness obtained before being given *premarital education* was 63.3% ready and 36.7% were not ready to face the first pregnancy.

**Table 4 Categories of Readiness for Brides in the First Pregnancy After *Premarital Education***

| **Readiness to face pregnancy** | **General** | | **Physical Readiness** | | **Psychological Readiness** | | **Readiness Social and financial** | |
|---|---|---|---|---|---|---|---|---|
| | **f** | **%** | **f** | **%** | **f** | **%** | **F** | **%** |
| Unready | 2 | 4.1 | 5 | 10.2 | 9 | 18, 4 | 8 | 16.3 |
| Ready | 47 | 95.9 | 44 | 89.8 | 40 | 81.6 | 41 | 83.7 |
| **Total** | **49** | **100** | **49** | **100** | **49** | **100** | **49** | **100** |

Based on table 4, the data shows that after being given *premarital education* for general readiness there is an increase of only 2 people or 4.1% of respondents were not ready and 47 people or 95.9% were ready to face the first pregnancy. Physical readiness also experienced an increase after being given *premarital education* as many as 44 people or 89.8% were ready and 5 people or 10.2% of respondents were still not ready to face the first pregnancy.

The psychological readiness of the bride in the face of the first pregnancy after being given *premarital education* from table 5.4 shows that most of the respondents were ready, namely 40 people or 81.6% and 9 people or 18.4 respondents still not ready. In social and financial readiness, some respondents were ready after being given *premarital education*, namely 41 respondents or 83.7% while 8 respondents or 16.3% were still not ready to face the first pregnancy.

**Bivariate Analysis**

**Table 5. Relationship between *Premarital Education* and Preparedness for Facing First Pregnancy at Prospective Brides at KUA Lubuk Begalung**

| ***PremaritalEducation*** | **Not Ready** | | **Ready** | | **Total** | | p-*value* | OR (95% CI) |
|---|---|---|---|---|---|---|---|---|
| | **f** | **%** | **F** | **%** | **f** | **%** | | |
| Before | 23 | 46,9 | 26 | 53,1 | 49 | 100 | 0,001 | 20,7 (4,5-95,2) |
| After | 2 | 4 , 1 | 47 | 95.9 | 49 | 100 | | |
| **Total** | 25 | 25.5 | 73 | 74,5 | 98 | 100 | | |

Based on table 5 shows that the readiness of brides is better after given *premarital education* (95.9%) compared to before being given *premarital education* about readiness to face the first pregnancy. The results of statistical tests using thetest *chi-square* obtained p-*value* = 0.001, meaning that there is a significant relationship between the provision of *premarital education* about first pregnancy preparedness with the readiness of prospective brides to face the first pregnancy in KUA Lubuk Begalung District, Padang City. Table 5 shows that *premarital education* is a factor that can affect the readiness of prospective brides in the face of the first pregnancy (OR = 20.7).

**Table 6.Test Results *PairedSamples T-Test* Readiness for Brides Facing First Pregnancy**

| **Variable** | **Mean** | **SD** | **SE** | **p *value*** |
|---|---|---|---|---|
| Before | 18.33 | 3.590 | 0.513 | 0.001 |
| After | 23.22 | 2.608 | 0.373 | |

Based on table 6, average ± SD score before interventionreadiness of prospective brides to face the first pregnancy was 18.33 ± 3.590 and the mean ± SD score after interventionnamely 23.22 ± 2.608. The statistical test results obtained p *value* = 0.001, it can be concluded that the provision of *premarital education* has an effect on the readiness of the bride to face the first pregnancy in KUA Lubuk Begalung , Padang.

## DISCUSSION

The results of this study indicate that 46.9% of respondents were not ready to face the first pregnancy before being given *premarital education.* In the aspect of general preparedness, most respondents were not ready to face their first pregnancy, 53.1% and the other 46.9% were ready to face the first pregnancy. This can be caused by a lack of knowledge and information obtained by respondents about the first pregnancy. On the aspect of physical readiness 61.2% of respondents were ready to face pregnancy before being given *premarital education* but there were still 38.8% of respondents not ready to face their first pregnancy. Likewise, the social and financial aspects have partially faced the first pregnancy before being given *premarital education,* which is 63.35% of respondents, but 36.7% of respondents also need special attention because they are not ready to face the first pregnancy.

Psikological readiness are the most unready aspect. That found 67.3% of respondents were unready and only 32.7% of respondents were ready to face the first pregnancy before being given *premarital education*. Most respondents who are not ready for this aspect can be caused by negative thoughts about pregnancy and concerns that something bad will happen during pregnancy as well as a lack of understanding of respondents about normal pregnancies and unplanned pregnancies. According to Bobak (2005) pregnancy planning is needed to ensure acceptance of pregnancy so that the mother does not experience stress and has an impact on the outcome of pregnancy. A good planning for pregnancy should be done during the preconception period. A well-planned pregnancy process will have a positive impact on the condition of the fetus and the physical and psychological adaptation of women and their partners (Oktalia, 2016).

The results of this study are in line with research conducted by Rokhanawati (2017) stating that before the intervention was given it was found that 44.2% of respondents were ready to face the first pregnancy and 55.8% were not ready to face the first pregnancy. One of the reasons for respondents not ready to face the first pregnancy is the lack of knowledge about pregnancy and the importance of being prepared for pregnancy. The level of knowledge is influenced by the level of education. The level of education will affect a person's critical mind, so the higher the level of education, the person's knowledge will be better. This knowledge can be obtained from various sources such as the mass media, electronic media, books, society, families and health workers (Notoatmodjo, 2012).

The results of this study indicate that aftergiven a *premarital education wassignificant* increase in the majority of respondents as much as 95.9% of respondents ready to face the first pregnancy and 4.1% still not ready after being given *premarital education.* Respondents who were not ready even though they had been given education about pregnancy could be caused by the increase in knowledge about pregnancy which made the respondents anxious because they misunderstood or did not understand the information provided (Utari, 2016).

In every aspect of readiness there is also an increase in the readiness of prospective brides to face the first pregnancy. In general readiness only 4.1% of respondents were not ready and 95.9% were ready to face the first pregnancy, 89,% of respondents were ready for aspects of physical preparedness, 81.6% in psychological preparedness, 83.7% of respondents were prepared for aspects social and financial readiness after being given *premarital education.*

This is evident that the provision of information and the addition of knowledge can increase the readiness of brides to face pregnancy. Based on research conducted by Amalia (2018), that there is an increase in knowledge of prospective pregnant women after being given health education about nutrition for pregnant women. Knowledge is the result of knowing and occurs after

someone has done an object of an object and most of it is obtained through vision and hearing (Priyoto, 2018). The level of knowledge will influence how a person acts and looks for the cause of a solution in his life (Walyani, 2014). So that this study found changes in data on the readiness of the bride after getting education about pregnancy readiness. Respondents received additional knowledge and information in this study through *premarital education* about pregnancy preparedness provided by researchers.

The results of bivariate analysis in this study indicate that there is an effect of *premarital education* onreadiness for the bride and there is a meaningful relationship between *premarital education* and readiness to face the first pregnancy. Based on the statistical test obtained sig value of 0.001, meaning that *premarital education* given to prospective brides has a relationship and affects the readiness of respondents to face the first pregnancy. In this studyOR (*odds ratio*20.7) means that respondents who did not get *premarital education* about pregnancy had a 20.7 times chance of being unprepared for the first pregnancy.

The results of this study are in line with Rokhanawati's (2017) research, regarding the effect of health education on first pregnancy preparedness. It was found that before being given health education 57.5% of respondents said they were not ready to face the first pregnancy but after being given health education only 39.5% of respondents not ready to face the first pregnancy. Likewise with Amalia's research (2018) there was an increase in knowledge of prospective brides after being given health education seen in the results of the study the average value before and after being given health education was 13.0 to 17.0. These results prove that there is an effect of providing health education to readiness to face the first pregnancy.

Based on this study it was found that before being given *premarital education* respondents were at most unprepared for aspects of psychological readiness. After being given *premarital education* about pregnancy readiness, there is an increase in preparedness in psychological aspects, although it is still an aspect with the most incorrect answers. This can be caused by excessive worry about pregnancy and anxiety if something bad happens during pregnancy.

In this study it was found that after being given *premarital education*, 2 of 49 respondents were still not ready to face the first pregnancy. Based on the characteristics of respondents with primary school education level and age <20 years, one of the factors causes respondents to remain unprepared even though they have been given *premarital education* about pregnancy. According to Notoatmodjo (2010), the level of education also determines whether or not an individual is easy to absorb and understand science, the higher a person's education the better the acceptance of information obtained. For women who have less than 20 years of age, most do not have physical, mental and social readiness in the face of pregnancy. The more age, the level of maturity and strength of a person will be more mature in thinking and working (Nursalam, 2008).

Submitting information about first pregnancy preparedness through prenuptial counseling is one method to prepare prospective mothers' knowledge about pregnancy and instill the principle of normal pregnancy. The premarital period is the most ideal period to assess the readiness of the bride and provide knowledge about pregnancy, so that after marriage a woman is ready to go through the pregnancy process and minimize incidents that are not alleviated due to lack of knowledge about pregnancy.

## CONCLUSION

1. Almost half of the respondents are not prepared to deal with the first pregnancy before being given a *premarital education*

2. Most respondents are ready to face first pregnancy after being given *premarital education* about pregnancy preparedness
3. There are influences *premarital education* on the readiness of the bride to face the first pregnancy in KUA Lubuk Begalung , Padang.

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# The Effect of Effleurage Massage Technique on Pain Changes in PostPartum at Salewangang Regional Public Hospital of Maros

**Julia Fitrianingsih[1], Ayu Lestari[2], Nurhidayat Triananinsi[3]**

[1] *Doctoral program, Faculty of Public health science, Hasanuddin University, Makassar*
[2] *Nursing Study Program, Midwifery and Nursing Faculty of Megarezky University*
[3] *Midwifery Study Program, Midwifery and Nursing Faculty of Megarezky University*
juliaqufitria@gmail.com

**Abstract**

The aim of research is to investigate the effect of effleurage massage technique on pain changes in postpartum at Salewangang Regional Public Hospital of Maros. Uterine contraction pain is a sensory and uncomfortable feeling in normal postpartum due to uterine involution after removal the fetus. The recommended technique for dealing with uterine contraction pain in the postpartum period by doing effleurage massage technique which is non-pharmacological therapy. This research used a quantitative method namely pre-experimental analytic research design withone-group pretest-posttest. The sampling technique used purposive sampling, total respondents were 20 respondents. Research instrument used the Numeric Rating Scale (NRS) pain scale observation sheet. Result of T-Dependent test was obtained Pvalue = 0.000, it means that there is an effect of effleurage massage technique on pain changes in postpartum

**Keywords** : Effleurage massage technique and pain changes, postpartum

## INTRODUCTION

The introduction of the paper, Pain is a subjective sensory and unpleasant emotional experience related to actual, potential or perceived tissue damage in events when damage occurs. Pain is caused by uterine contraction requires various handling to minimize the pain felt by mother so that their comfort can be felt. The role of a nurse in that condition is to help to relieve postpartum maternal pain by providing intervention in pain relief(1,2).

Pain management strategy is an action to reduce pain, which can be done by pharmacological and non-pharmacological therapy. Nonpharmacological therapy can be done by massage therapy to mothers called effleurage massage technique.(3,4)

Effleurage is a massage using palms that pressure on surface of body in a circular direction repeatedly.(3,5) This technique aims to improve blood circulation, make pressure on, and warm the abdominal muscles also increase physical and mental relaxation. It is a massage technique that is safe, easy to do, does not require a lot of equipment, no spend more cost, has no side effects and can be done alone or with helping others.(5,6) The main action of effleurage massage is the application of Gate Control theory that can "close the gate" to inhibit the circulation of excitatory pain at the higher center in the central nervous system.(4,5)

The steps to do this technique are both palms sweeping lightly, firmly and constantly with a circular abdominal movement pattern, starting from the lower abdomen on pubic symphysis, pointing to the side of abdomen, continuing to the uterine fundus then get down to the umbilicus and back to the abdomen the lower part, on the pubic symphysis.(4,6) the shape of movement pattern is like a "butterfly". Repeat the movements above for 3-5 minutes and give extra lotion or oil / baby oil if it is needed.(4,5)

Medical record data at Salewangang Regional Public Hospital of Maros in 2017, there were 1,356 mothers gave birth in 2015, gave birth 963 (71.01%) and Section of Cessarea (28.98%). Whereas in 2016 (January - July) 776 normal delivery was 568 (73.19%) and SC 208 (26.80%). (Medical Record Data of Salewangang Regional Public Hospital of Maros in 2017).

The result of a preliminary studieswas conducted in February 2017 at Salewangang Regional Public Hospital of Marosfrom 7 normal postpartum is obtained data that all mothers experienced pain in the first day, 2 mothers experienced pain during> 3-4 hours postpartum and 5 motherswhen > 1-2 hours postpartum. Characteristics felt by postpartum in the first day are heartburn in the lower abdomen with a scale of 4-5 which means medium pain. Pain in uterine contractions that are felt arises when mother is silent and does activities. Duration of pain felt by mother ranges from 1-5 minutes. Pain management performed by mother is to do deep breathing technique, distraction by walking, slowlyactivity, and silent for a momen.

## VIII. METHODS

Types of research used Experiment through Quasi Experimental. The aim was to investigate whetherthere is or no an effect of effleurage massage technique on pain changes in postpartum.

## IX. RESULT

The results section is where you report the findings of your study based upon the The stage was carried out the distribution analysisof the percentages of variables referred to general characteristics of respondents such as: age, education, and occupation that can be seen in the table following:

### a. Frequency distribution based on age

**Table 4.1**
**Frequency distribution based on the age of respondents in the maternity ward at Salewangang Regional Public Hospital of Maros in 2017**

| Age | Frequency (f) | Percentage (%) |
|---|---|---|
| <20 and>35 years | 7 | 35 |
| 20 – 35 years | 13 | 65 |
| Total | 20 | 100 |

*Source : Primary Data 2017.*

Table 4.1 showed 20 respondents as sample including 7 respondents (30%) whose age <20 years and >35 years, and 13respondents (65%) whose age of 20-35 years old.

### b. Distribution of frequency based on education

**Table 4.2**
**Frequency distribution based on respondents education in the maternity wardat Salewangang Regional Public Hospital of Maros in March 2017**

| Education | Frequency (f) | Percentage (%) |
|---|---|---|
| Elementary (Elementary and Junior High School) | 9 | 45 |
| Higher (Senior High School and University) | 11 | 55 |
| Total | 20 | 100 |

*Source : Primary Data 2017*

Table 4.2 described 20 respondents as sample including9 respondents (45%) had graduated from elementary school, 11 respondents (55%) had graduated from senior high school and university.

**c. Frequency of distribution based on occupation**

**Table 4.3**

**Frequency of distribution based on respondents' occupation in maternity wardat Salewangang Regional Public Hospital of Maros in March 2017**

| Occupation | Frequency (f) | Percentage (%) |
|---|---|---|
| Housewife | 17 | 85 |
| Private | 3 | 15 |
| TOTAL | 20 | 100 |

*Source : Primary Data 2017*

Table 4.3 described there were20 respondents as sample including17 respondents (85%) were housewives and 3 respondents (15%) were private.

**d. Frequency distribution based on parity**

**Table 4.4**

**Frequency distribution based on the parity of respondents in the maternity ward at Salewangang Regional Public Hospital of Maros in 2017**

| Criteria | Frequency (f) | Percentage(%) |
|---|---|---|
| Primiparous | 9 | 45 |
| Multiparous | 11 | 55 |
| Total | 20 | 100 |

*Source : Primary Data 2017*

Based on table above , the result of data was obtained of maternity. There were 9 respondents (45%) who were primiparous. While 11 respondents (55%) were multiparous

**e. Pain of Uterine Contraction before Effleurage technique**

**Table 4.5**

**List of frequency distribution based on average of uterine contraction pain Pre effleurage massage technique in the maternity room at Salewangang Regional Public Hospital of Maros**

| Average of uterine contraction pain | Frequency (f) | Percentage(%) |
|---|---|---|
| Mild pain | 2 | 10 |
| Medium pain | 16 | 80 |
| Intense pain | 2 | 10 |
| TOTAL | 20 | 100 |

*Source : Primary Data 2017*

As showed in Table 4.5, there were 2 respondents (10%) who got mild pain. Then, there were 16 respondents (80%) who got medium pain. Next, there were 2 respondents (10%) who got intense pain.

**f. Pain of Uterine Contraction post effleurage technique**

**Table 4.6**

**The frequency distribution based on the average pain of uterine contractions post effleurage massage technique in maternity ward at Salewangang Regional Public Hospital of Maros in 2017**

| Average of uterine contraction pain | Frequency (f) | Percentage (%) |
|---|---|---|
| Mild pain | 13 | 65 |
| Medium pain | 7 | 35 |
| TOTAL | 20 | 100 |

*Source : Primary Data 2017*

As described in Table 4.6, there were 13 respondents (65%) who got mild pain. Then, there were 7 respondents (35%) who got medium pain.

**2. Bivariate Analysis**

**Hypothesis**

Both of datathat had been collected then analyzed by using the Mann Whitney Test . This test was used to investigate the effect of effleurage massage technique before and after taking action at Salewangang Regional Public Hospital of Maros. Here were the result of normality test.

**Table 4.8**
**Tests of normality**

| **Treatment of Effleurage Massage** | **Kolmogorov-smirnov[b]** | | |
|---|---|---|---|
| | **Statistics** | **Df** | **Sig.** |
| **Pre** | **0.385** | **3** | **.** |
| **Post** | **0.181** | **10** | **0.200** |
| | **0.349** | **5** | **0.046** |

Because data were not distributed normal, so hypothesis of this research used parametric test by analysis of Mann whidney test.

**Tabel 4.9**
**The frequency distribution of pre-post Effleurage Technique on Pain Changes to Postpartum**

| **Effleurage technique** | **N** | **Mean** | **Sum** | ***p=0,05*** |
|---|---|---|---|---|
| **Pre test** | **20** | **27.60** | **552.00** | **0,000** |
| **Post test** | **19** | **12.00** | **228.0** | |
| **Total** | **39** | | | |

As showed in table 4.9, it described pre natal using effleurage technique. There was 27.60 mean, 552.00 sum before effleurage technique. Then there was 12.00 mean, 228.0 sum and p-value=0.000 after effleurage technique. It meant that there was effect of effleurage technique on pain changes to postpartum at Salewangang Regional Public Hospital of Maros.

## X. DISCUSSION

Researcher explained discussion of researchabout the effect of effleurage technique on pain changes to postpartum at Salewangang Hospital of Maros in 2017.

This research aimed to investigate the effect of effleurage technique on pain changes to postpartum and the level of uterine contraction pain pre and post effleurage technique. This research was conducted as many as 20 postpartum as respondents in the first day 0-2 hours after parturition that experienced pain of uterine contractions. This research was conducted by observing the pain of postpartum using an observation sheet with a numeric scale. This research was influenced by the characteristics of respondents based on age, education, occupation, and parity classification.

Table 4.4 showed that data was more than half (55%) categorized as multiparaous in the parity classification. Women in the multiparous had the most pain scale. The average pain scale was 6 (as medium to intense pain), whereas in the primiparous , it was obtained average of 5 (medium pain). Stated that parity factor has a quite important role.(7,15)

Pain of uterine contractions increased significantly after the baby came out. It caused by produced of oxytocinhormone with the pituitary gland so that it can strengthen and regulate uterine contractions.(11,13) Pretest is done before giving intervention of effleure massage technique by observing and showing numeric rating scale (NRS) so that it was obtained by pain scalebased on postpartum pain. Researchers did 20 respondents in pre-test during 2 hours after postpartum. It was obtained by several pain scales would be added in order to find the result ofaverage scales.

An univariate analysis described frequency distribution based on pain of uterine contractions after effleurage massage technique that explained in table 4.6, there was less than half (65%) of postpartum experienced contractionary pain with an average mild pain scale (1-3). Pain experienced by postpartum after effleurage massage technique was on the range of medium pain scale (4-6). The pain scale (4-6) was the highest level of pain felt by the postpartum when did posttest.

The result of observation found that the highest pain scale was experienced by mothers who experienced the highest pain scale when did pretest so that it decreased that not far from the result of pretest. Other respondents who experienced the highest pain scale when did posttest that experienced by primiparous mothers who did not experience any decline after doing intervention. The lowest pain scale was 1 pain scale, because they experienced pain with the lowest scale when they did pretest so that it decreased with a low pain scale too.

## XI. CONCLUSION

Based on research and data analysis from pre and post effleurage massage technique in postpartum using Mann Whitney test method, it can be concluded that there is an effect of effleurage massage technique on pain changes in postpartum at SalewangangRegional Hospital of Maros

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A L T E R A T I O N I N T H E C O L L A G E N C O N T E N T OF T H E H U M A N UTERUS DURING PREGNANCY AND POST PARTUM BY THOMAS G . MORRIONE , M . D ., AND SAM SEIFTER , PH . D . ( From the Department of Pathology , Long Island College Hospital , Brooklyn , and the Department of Biochemistry , Albert Einstein College of Medicine , Yeshiva University , New York ) ( Received for publication , October 13 , 1961 ) The physiological resorption of collagen during recovery from experimental cirrhosis was demonstrated in 1947 ( 1 ). Factors which influence the deposition and disappearance of collagen in experimental cirrhosis , as well as the phenome- non of the regression of scar tissue , were examined subsequently ( 2 , 3 ). A striking resorption of collagen from the rat uterus following parturition was described b y Harkness and Harkness in 1954 ( 4 ). Later these authors ( 5 ), and Hark- ness and Moralee ( 6 ), suggested that the post p a r t u m uterus is especially suitable for investigation of the physiological dissolution and catabolism of endogenous collagen . The present study was undertaken to determine the alterations in the nature and content of collagen occurring in the myometrium of the h u m a n uterus

during pregnancy and the post p a r t u m involutionary period . Materials and Methods Specimens . --Human uteri were obtained from patients undergoing hysterectomy , caesarian hysterectomy , or at autopsy . Some specimens were analyzed immediately after removal and others were kept in the frozen state at --20 ° C and analyzed subsequently . The cervix was excluded from the present study . Scars from previous caesarian sections , when recognized in the gross , were excised and excluded from specimens chosen for analysis . Before being employed for preparation of enzyme extracts or for chemical study , uteri were trimmed free of endometrium , decidua , and blood clots . Histological Examination . --Sections of uteri were prepared after fixation in formalin , formalin-mercury bichloride , and Zenker ' s solutions . Stains used were hematoxylin and eosin , Masson trichrome , van Gieson ' s , Laldlaw ' s reticulum , Schiff-McManus , Hales ' colloidal iron , Sudan III , alcian blue-chlorantine red , and luxol fast blue-periodic acid-Schiff . Fat-Free Dry Wdght . --Allquots of minced uterine tissue were extracted for two 24 hour periods with i00 volumes of acetone and then again by two slrnilnr treatments with ether . The materials were finally dried t…. 1961;357–65.

# THE RELATIONSHIP BETWEEN ANTENATAL CARE IMPLEMENTATION AND LABOR PREPARATION OF THIRD TRIMESTER PRIMIGRAVIDA MOTHERS IN LUBUK BUAYA PUBLIC HEALTH CENTER

**Ermawati[1], Yulizawati[2], Nabyla Annisa[3]**

*[1]DepartmenObstetric and Gynecology, RSUP DR M Djamil, Padang, Indonesia*
*[2]Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
*[3]Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
ermawati@gmail.com[1]

**Abstract**

The readiness of a mother and family in facing labor is one of the factors that influence the incidence of maternal and neonatal mortality rate. An antenatal care visit helps mothers and families to prepare for a better labor process. Lubuk Buaya is the area with the lowest percentage of ANC visits in Padang. The aim of this study was "to determine the relationship between antenatal care implementation and labor preparation of third-trimester primigravida mothers in Lubuk Buaya Public Health Center working area". This type of research is observational analytic with the cross-sectional method. The samples of this study were primigravida trimester III and the samples were taken using Proportionate Stratified and Systematic Random Sampling techniques. The data collection involved 36 respondents in the Lubuk Buaya Health Center working area by filling out questionnaires. Data were analyzed by univariate and bivariate using Chi-square ($p \leq 0.05$). The results of this study found that the percentage of third-trimester primigravida mothers who had good labor preparations was higher in mothers who performed a good ANC (69.2%). Based on statistical tests, the results obtained p-value ($p = 0.013$), meaning that there is a significant relationship between the implementation of antenatal care and preparation for delivery in trimester III primigravida mothers in the working area of Lubuk Buaya Padang Health Center

**Keywords** : Antenatal care, childbirth preparation

## INTRODUCTION

The World Health Organization (WHO) estimates that 830 women die every day due to complications from pregnancy and the birth process. About 99% of all maternal deaths occur in developing countries. The ratio of maternal deaths in developing countries in 2015 was 239 per 100,000 live births compared to 12 per 100,000 live births in developed countries. At the end of 2015, approximately 303,000 women died during and after pregnancy and childbirth (WHO, 2016).

The Global Heart Observatory (GHO) data, the number of maternal deaths decreased by 43% between 1990 and 2015. Globally, the maternal mortality rate has fallen by 44% over the past 25 years. Therefore, to accelerate the reduction in maternal mortality rates, countries are now united behind a new target to reduce maternal mortality rates, SDGs.

One of the targets in the Sustainable Development Goals (SDG's 2030) on health in the third number is to ensure a healthy life and promote prosperity for all people of all ages is to reduce mortality globally to less than 70 per 100,000 live births, with no country has a maternal mortality rate of more than twice the global average (WHO, 2016).

Several factors that influence the high MMR according to Prawirohardjo (2009) by 3 things include; there is still a lack of knowledge about causes and consequences as well as overcoming

complications that occur during pregnancy, childbirth, childbirth, lack of understanding and knowledge of reproductive health, lack of even distribution of midwifery services for the mother.

According to research conducted by Latifah, one of the causes of neonatal death is an ANC examination that is less than 4 times or incomplete pregnancy visits (Latifah, 2012). Therefore, efforts can be made to reduce maternal and fetal mortality by preventing delays in treatment through good labor preparation.

The preparation of labor can be done by preparing a birth plan and preparing a plan if complications occur in the delivery of the mother. Preparing a birth plan is a plan made by the mother, father, and health care officer to identify the helper and the place of delivery, as well as planning savings to prepare the cost of labor.

Then the family also needs to prepare a plan if complications occur in the delivery of the mother, such as identifying a place of reference and transportation to reach the place, preparing blood donors, making financial preparations and identifying the first decision maker and second decision maker if the first decision maker is not available (Saifuddin, 2009).

Childbirth is a natural process experienced by women, which is characterized by the issuance of conception results that are able to live outside the womb through several processes such as the thinning and opening of the cervix, as well as contractions that occur at certain times without complications or obstetric complications in the mother or fetus (Rohani, 2013).

Obstetric complications are the pain in pregnant women, mothers of childbirth, postpartum mothers, and fetuses in the womb, both directly and indirectly, including infectious diseases and non-communicable diseases that can threaten the lives of mothers and fetuses (Ministry of Health, 2015). To anticipate this, antenatal care needs to be done.

Antenatal care services are midwifery services provided by health workers to provide services to mothers during pregnancy, in the implementation of services carried out according to Midwifery Care Standards (Manuaba, 2010). The implementation of antenatal care is a service carried out by health personnel to monitor and support the health of normal pregnant women and detect mothers with complications in pregnancy (Saifuddin, 2009).

Antenatal care services are carried out with 10T service standards and at least four times during pregnancy, with one-time details in the first trimester (before 14 weeks' gestation) and the second trimester (during 14-28 weeks of birth), then at least 2 contacts at third trimester namely during pregnancy 28-36 weeks and after 36 weeks' gestation. Antenatal visits can be done more than 4 times depending on the condition of the mother and fetus (RI Ministry of Health, 2014).

Services provided at the ANC visit with the 10 T standard, namely: Weighing and measuring height, blood pressure, determining / nutritional status value (measuring LiLa), fundus uterine height, determining fetal presentation and fetal heart rate, Tetanus Toxoid immunization , Iron tablets, laboratory tests, case management, speech or counseling (including P4K, postpartum family planning, antenatal care services, pregnancy danger signs, maternity signs and information provided regarding pregnancy, childbirth, and childbirth) (RI Ministry of Health, 2008).

In the third trimester, many mothers prepare all their antenatal care services until a blood examination, which aims to determine the mother's blood type and prepare the donor before delivery.

The impact that occurs if irregular pregnant women carry out antenatal care, namely no detection of abnormalities that occur in pregnant women and fetuses, can not know the risk factors that occur in the mother and can not know early the disease suffered by the mother during pregnancy (Prawirohardjo, 2010).

Assessment of the implementation of health services for pregnant women (ANC) can be done by looking at the coverage of K1 and K4. Coverage K1 is the number of pregnant women who have received antenatal care for the first time by health workers compared to the target number of pregnant women in one work area for one year.

Whereas K4 coverage is the number of pregnant women who have received antenatal care according to the standard at least four times according to the schedule recommended in each trimester compared to the target number of pregnant women in one work area for one year (Ministry of Health, 2016: 106)

Research conducted by Murniati (2011), there is a tendency for the level of knowledge with the use of antenatal services, where mothers who use antenatal services tend to have good knowledge of the knowledge itself. Gebre, Gebremariam, and Abebe (2015) stated that birth readiness relates to mothers who are informed in antenatal care, have knowledge of at least two danger signs during pregnancy.

In 2015 K1 coverage in Indonesia was 95.75%, while K4 coverage was 87.48%, then in 2016 K4 visits were 85.35% (RI Ministry of Health, 2017). K4 coverage in West Sumatra in 2015 amounted to 79.19%, while in 2016 K4 coverage was 78.94%.

The coverage of antenatal care in Padang City in 2015 was K1 of 100.28% and K4 visits were 95.61% while in 2016 K1 visits were 99.58% and K4 visits were 96.29%. Antenatal care at the Lubuk Buaya Community Health Center is the lowest percentage of several health centers in the city of Padang, where K1 visits were 85.5% while K4 visits were 83.1% (Padang Health Office, 2017).

A preliminary study was conducted in the working area of the Lubuk Buaya Health Center on April 14, 2018 in 10 third trimester primigravida mothers. It was found that 4 mothers had good antenatal care, 1 mother who had poor antenatal care and found 2 women who were preparing childbirth is good, 2 mothers who have enough childbirth preparations, and 1 mother whose labor preparation is lacking.

## METHOD

This study was an observational analytic study with a cross sectional approach. The sample in this study was the third trimester primigravida mothers who were in the working area of the Lubuk Buaya Padang Health Center in 2018 that met the inclusion criteria and the samples were taken using the proportional stratified random sampling technique. Data collection by questionnaire. Data were analyzed by univariate, bivariate analysis using Chi-Square (p-value $\leq 0.05$).

**RESULT**

**Univariate Analysis**

**Table 1. Distribution of Frequency Demographic Characteristics**

| Characteristics | F | % |
|---|---|---|
| **Age** | | |
| ≤20 years | 1 | 2,8 |
| 21-35 years | 34 | 94,4 |
| >35years | 1 | 2 |
| **Education** | | |
| - Elementary | 2 | 5,6 |
| -JuniorHigh School | 5 | 13,9 |
| - Senior High School | 18 | 50 |
| - College | 11 | 30,5 |
| **Employment** | | |
| - Does not work | 27 | 75 |
| - teacher | 3 | 8,3 |
| - Entrepreneur | 4 | 11,1 |
| - Civil servants | 2 | 5,6 |
| **Blood Type** | | |
| - A blood type | 13 | 36,1 |
| - B Blood type | 10 | 27,8 |
| - AB Blood type | 5 | 13,9 |
| - O Blood type | 8 | 22,2 |

Based on table 1, the majority of mothers were in the age group of 21-35 years (94.4%). Most mothers have a high school education (50%), most mothers do not work (75%), and most mothers have blood type A (36.1%).

**Table 2. Distribution of Frequency of Labor Preparation**

| Childbirth Preparation | F | % |
|---|---|---|
| Less | 5 | 13,9 |
| enough | 10 | 27,8 |
| Well | 21 | 58,3 |
| **total** | **36** | **100** |

Based on Table 2 shows that most of the third trimester primigravida mothers had good labor preparation (58.3%).

**Table3. Distribution of Frequency Antenatal Care Implementation**

| Antenatal care implementation | F | % |
|---|---|---|
| Not good | 10 | 27,8 |
| Well | 26 | 72,2 |
| **Total** | **36** | **100** |

Based on Table3 shows that the majority of mothers get Antenatal Care services in accordance with ANC service standards (72.2%).

**Bivariate Analysis**

**Table 4. The Relationship between Antenatal Care Implementation and ChildbirthPreparation in Primigravida Trimester III**

| Antenatal Care Implementation | Childbirth Preparation in Primigravida Trimester III | | | | | | Total | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Well | | Enough | | Less | | | |
| | f | % | F | % | f | % | | |
| Well | 18 | 69,2 | 7 | 26,9 | 1 | 3,8 | 26 | 0,013 |
| Less | 3 | 30,0 | 3 | 30,0 | 4 | 40,0 | 10 | |
| | 21 | 58,3 | 10 | 27,8 | 5 | 13,9 | 36 | |

Based on table 4 shows that the percentage of third trimester primigravida mothers who had good labor preparations was more in mothers who performed a good ANC (69.2%).

Based on statistical tests, the results obtained p-value (p = 0.013), meaning that there is a significant relationship between the implementation of antenatal care and preparation for delivery in trimester III primigravida mothers in the work area of Lubuk Buaya Padang Health Center.

## DISCUSSION

### UnivariateAnalysis ofChildbirthPreparation

Based on the results of the study, the majority of third-trimester primigravidamothers in theLubukBuaya Community Health Center work area had good preparation (58.3%), adequate (27.8) and poor (13.9%).

Pregnant women who have good labor preparation are influenced by maternal age, where some mothers are aged 21-35 years (94.4%). This is in line with the research conducted by Rahmadani (2017) at the Banguntapan II Bantul Yogyakarta Public Health Center, showing that pregnant women at risk (20-35 years) have good labor preparation (68.8%), this is due to age These pregnant women have mature thoughts, so that they will be more confident in preparing everything for labor.

Whereas according to the theory put forward by Edyanti (2014), states that the risk of mothers aged less than 20 years or more than 35 years is greater for obstetric complications compared to mothers aged 20-35 years.

Mothers who have high school / equivalent (50%) and tertiary educationlevels (35%) are also supporting factors for good childbirth preparation for pregnant women, this study is in line with Astria's research (2009) which states that mothers who have a good level of education (High School and College), will be better prepared in the birth.

At the time of the study, researchers found mothers who did not work (75%). Work is also a good factor in the preparation of labor, this study is in line with Rusmita (2015), stating that pregnant women who do not work have a greater chance than pregnant women who work. And according to the MOH theory (2008), which states that if the mother leaves the house, it will take up a lot of her time so that it will affect her childbirth preparation.

Childbirth Preparation consists of Physical Preparation, Psychological Preparation, Financial Preparation and Cultural Preparation. One thing that should be prepared by pregnant women before labor is to avoid fear, panic, and be calm. Pregnant women can go through labor well and be better

prepared by asking for support and affection from the people closest to them. While Financial Preparation for pregnant women who will give birth by saving from the beginning of pregnancy to birth. And mothers also need to know the habits or customs that are not good for pregnancy and childbirth (Rosyidah, 2017).

From the results of the study, which was assessed by filling out the questionnaire by the respondents indicating that the question about the occurrence of an emergency at the time of delivery I agreed to be referred to the hospital was the most answered point disagreed by the respondent. This is most likely due to the lack of information provided by pregnant women regarding labor preparation and the impact if not referred.

From the results of research and interviews with respondents, most respondents stated that if they were taken to the hospital, the costs borne were expensive and there were still some mothers who thought that being taken to the hospital would make their body condition worse.

In achieving P4K, financial preparation has not been prepared, generally pregnant women provide 1 month before delivery and are prepared by pregnant women themselves. Even though the preparation of labor from the beginning of pregnancy will make the mother better prepared to face labor and know what steps to take if an emergency occurs.

**Implementation of Antenatal Care**

Based on the results of this study, themajority of third trimester primigravida mothers in the Lubuk Buaya Community Health Center work area had good ANC implementation (72.2%), while the rest were not good (27.8%). This research is in line with Anjarsari (2011) research in Depok II Sleman Health Center, showing that 53.4%of mothers had good antenatal care implementation, while 46.6% of mothers were in the poor category.

According to research conducted by Anjarsari, the good implementation of antenatal care is due to pregnant women realizing that antenatal care is important and useful for detecting complications that occur in the mother and fetus.

The results of this study are different from the research conducted by Junga (2016) in the Ranotana Weru Health Center in Manado City, which showed that 78.6% of mothers aged 20-35 years were in poor ANC implementation. This is due to the lack of knowledge factors that affect mothers in conducting Antenatal Care examinations.

The implementation of Antenatal Care is assessed based on the 10T Standard Implementation set by the Indonesian Ministry of Health (2014). From the results of the study it was found that the administration of TT immunization was most not carried out by pregnant women during ANC services. Most respondents stated anti-vaccine. Even though TT immunization is important because it can avoid the outbreak of tetanus which is at risk for both the mother and her baby.

**Bivariate Analysis**

**The Relationship between Antenatal Care Implementation and ChildbirthPreparation in Primigravida Trimester III**

Based on the results of the study, it was found that the percentage of mothers who had good childbirth preparations were higher for mothers who received good ANC services (69.2%) compared to mothers who received ANC with less implementation (30.0%).

The results of the statistical test using the Chi-Square test showed a p-value = 0.013 ($p \leq 0.05$). From these results it can be concluded that there is a significant relationship between the implementation of Antenatal Care and labor Preparation in trimester III primigravida mothers in the working area ofthe Lubuk Buaya Padang Health Center in 2018.

The results of this study relate to the research conducted by Oktafiana, et al. In 2016 in Srandakan Bantul Health Center, stating that mothers who carry out routine and quality antenatal care tend to

have good labor preparation (80.4%). This is because every visit, the mother gets information about the preparations that must be prepared during pregnancy until delivery.
For some mothers who do not carry out ancillary routinely, it is caused by a lack of awareness of mothers in checking their pregnancies. Mother thinks her condition and fetus are fine so there is no need to carry out ANC. Even though ANC is carried out in full according to the 10T standard and preparation for labor must be prepared from the beginning of the pregnancy can monitor the condition of the mother and fetus, can overcome quickly if there is a problem of pregnancy and the mother is more prepared to prepare the needs that will be used later in labor.
For this reason, it is necessary to provide information to the public regarding the implementation of antenatal care and preparation for labor, not only to the mother, but also to the husband, so that the husband understands and motivates the mother to check the pregnancy.

## CONCLUSION

1) Most respondents are in the age group of 21-35 years, half of the respondents are mothers with high school / equivalent education, most of the respondents are mothers who do not work or housewives and most of the respondents have blood type A.
2) Most of the respondents were in preparation for labor in a good category.
3) More than half of the respondents in the Lubuk Buaya Puskemas have a good Antenatal Care Implementation.
4) There is a significant relationship between the Implementation of Antenatal Care and the Preparation of Childbirth in Primigravida Trimester III in the working area of the Lubuk Buaya Padang Health Center.


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# FACTORS RELATED WITH THE INCIDENCE OF SEVERE PREECLAMPSIA AT THE HOSPITAL DR M DJAMIL PADANG

**Bobby Indra Utama[1], Meilinda Agus[2], Nissa Prima Sari[3]**

[1]*Departmen Obstetric and Gynecology, RSUP DR M. Djamil, Padang, Indonesia*
[2]*Departmen of Diploma Midwifery, Poltekes Kemenke Padang, Padang, Indonesia*
[3]*Bachelor of Midwifery, Faculty of medicine, Universitas Andalas, Padang, Indonesia*
bobbyindrautama@med.unand.ac.id[1]

**Abstract**

Preeclampsia is a condition characterized by an increase in maternal blood pressure of at least 140/90 mmHg accompanied by proteinuria and other symptoms that occur after 28 weeks gestation. The incidence of preeclampsia in hospital DR M Djamil Padang reached 33%. The exact cause of preeclampsia remains unknown, but extreme maternal age, nulliparity, history of hypertension are suspected to be the risk factors for this. This study aims to determine the factors related with the incidence of severe preeclampsia in the hospital DR M. Djamil Padang.

This was observational analytic study with case control study design. The population is divided into two, the case population (all mothers with severe preeclampsia) and the control population (all mothers with no severe preeclampsia). The sample was 85 people taken by simple random sampling with the comparison between case : control (1:1). Data were taken from the patient's medical records. Data analysis was performed using univariate and bivariate using Chi square test with p value < 0,05.

The results of this study showed there was a relationship between age (p = 0,001), parity (p = 0,020) and history of hypertension (p = 0,003) with the incidence of severe preeclampsia in the hospital DR M Djamil Padang. While the factor that has no significant relation is multiple pregnancy.

Mothers with age <20 years old or ≥35 years old, nulliparity, and having a history of hypertension are more at risk for severe preeclampsia. Therefore it is expected for health workers especially midwives to increase awareness to patients especially for those who at risk of preeclampsia.

**Keywords** : Severe preeclampsia, risk factors, Hospital DR M. Djamil Padang

## INTRODUCTION

Health is one of the most crucial indicators in the development of a country. Therefore, the government is committed to improving health through the program "Indonesia Sehat 2025"

The goal of health development towards “Indonesia Sehat 2025” is to increase awareness, willingness, and healthy life for every person through the creation of a behavioral and healthy society, reaching quality health services fairly and equally, and have the highest health level in all areas Republic of Indonesia (Indonesia’s Department of Health, 2009).

One of the indicators used in achieving this goal is to reduce maternal mortality from 262 per 100,000 live births in 2005 to 74 per 100,000 live births in 2025. But in reality the maternal mortality rate in Indonesia is still far from the target. Based on the report of Indonesia Health Demographic Survey (SDKI), the trend of maternal mortality rate from year to year has decreased significantly until 2010. The maternal mortality rate was 307 per live birth in 2002 then decreased to 228 per live birth in 2007 then decreased again to 125 per live birth in 2010. However there was a significant increase in 2012 that was 359 per live birth (SDKI, 2012). And by 2015 the maternal mortality rate dropped into 305 per live birth (Indonesia’s Ministry of Health 2015)

To achieve the target of "Indonesia Sehat 2025" is certainly required a good commitment from government and society, considering that maternal mortality is still a major problem in Indonesia.According to WHO in 2016, the cause of maternal death is pre-existing condition (28%), bleeding (27%), hypertension in pregnancy (14%), infection (11%), complications of abortion (8%), prolonged labour and others (9%) and blood clots or embolism (3%).

From the data it is seen that besides bleeding, it turns out that preeclampsia also occupies the highest percentage of maternal deaths. An estimated about 50,000 women worldwide died from preeeklampsia, the number of incidents varies by country, in Israel the incidence of preeclampsia by 2.8%, in Scotland by 5.8% and 14.1% in Australia (Shamsi et al, 2013). According to Indonesia Health Demographic Survey in 2002-2003, the percentage of pregnant women had preeclampsia in Indonesia was 0.4 percent and mothers with eclampsia were 1.4 percent. In West Sumatra in 2011 the number of maternal mortality caused by eclampsia was 23 percent, in 2012 it decreased to 22.9 percent and in 2013 increased to 26.2 percent (Hanum, 2013). Meanwhile, according to the Annual Report of Padang City Health Office 2015 preeclampsia and eclampsia still remain the main cause of maternal death as much as 23.5 percent.

Preeclampsia is a condition in which the onset of hypertensive symptoms in pregnancy is accompanied by proteinuria. In severe preeclampsia can lead to eclampsia with symptoms of seizures. According to Djannah (2010) the incidence of preeclampsia in developing countries is about 0.3 percent to 0.7 percent, whereas in developed countries the incidence of preeclampsia is smaller which is 0.05 percent to 0.1 percent.

The exact cause of preeclampsia is still unknown, many theories put forward as the cause of preeclampsia, but with many theories can not be explained all the things related to this disease (Wiknjosastro, 2010). Apparently preeclampsia is not associated with a single factor, but many factors. The factors that are often found as risk factors for preeclampsia are aged under 20 years and over 35 years, obesity, multiple pregnancy, history of preeclampsia descent, economic status, etc. However, among the factors found it is often difficult to determine which is the cause and which is

**Table 1 : Frequency Distribution Case and Control at Hospital DR M. Djamil Padang**

| Variable | Population | Subjects | Percentage |
|---|---|---|---|
| Case (preeklampsia) | 223 | 85 | 38,49 % |
| Control (non preeklampsia) | 1051 | 85 | 8,08 % |

the result (Manuaba, 2012).

Hospital DR M. Djamil Padang is a government hospital located in Padang City. Besides as an educational hospital, Hospital DR M. Djamil is also a referral hospital that receives many cases, including obstetric cases. Report Data the authors got from the medical record hospital DR M. Djamil, the number of severe preeclampsia cases in 2014 was 20.14 percent and in 2015 increased to 32.5 percent and the latest data in 2016 incidence of severe preeclampsia was 33 percent.

Based on preliminary observations in the medical record of hospital DR M. Djamil, among the risk factors associated with severe preeclampsia, the authors only chose risk factors such as age, parity, history of hypertension, and multiple pregnancy due to limitations of author and medical record of hospital DR M. Djamil Padang.
Based on that, the authors were interested to know Factors Associated with the Insidence of Severe Preeclampsia at Hospital Dr M. Djamil Padang

## METHODS

**Table 2 : Frequency Distribution of Factors Related with the Incidence of Severe Preeclampsiaat Hospital DR M. Djamil Padang**

| Dependent Variables | | Case | | Control | |
|---|---|---|---|---|---|
| | | f | % | f | % |
| Maternal age | <20 &>35 years old | 49 | 57,6 | 22 | 25,9 |
| | 20-35 years old | 36 | 42,4 | 63 | 74,1 |
| | Total | 85 | 100 | 85 | 100 |
| Parity | Nulliparous | 44 | 51,8 | 29 | 34,1 |
| | Multiparous | 41 | 48,2 | 56 | 65,9 |
| | Total | 85 | 100 | 85 | 100 |
| History of hypertension | Yes | 23 | 27,1 | 7 | 8,2 |
| | No | 62 | 72,9 | 78 | 91,8 |
| | Total | 85 | 100 | 85 | 100 |
| Multiple pregnancy | Yes | 4 | 4,7 | 6 | 7,1 |
| | No | 81 | 95,3 | 79 | 92,9 |
| | Total | 85 | 100 | 85 | 100 |

This was observational analytic study with case control design. The population is divided into two, the case population (all mothers with severe preeclampsia) and control populations (all mothers with no severe preeclampsia). The location chosen for this study is hospital RSUP DR M. Djamil Padang. The study was conducted in November 2016 - December 2017. The sample size was 170 people taken by Simple random sampling with comparison between case : control (1: 1). Data were taken from the patient's medical records. The data analysis used is Chi square.

## RESULT AND DISCUSSION

The subject of this study was 170 respondents. Data collected from patient's medical record from January to August 2017.

### Limitations of study

This study is inseparable from various limitations and inevitable biases such as :

1. This study used secondary data obtained from the patient's medical records, so the validity of data in this study depends on the validity of data in the medical record.
2. Not all variables that may be the risk factors for severe preeclampsia can be taken for this study, as they should be based on availability for some data in the medical record format.

Table 1 showed the frequency distribution of subjects used in this study. Case group were mothers with severe preeclampsia which was 85 cases from 223 cases from January to August 2017 or 38.49%. While the control group was all mothers with other complications (non preeclampsia) which were also 85 cases from a total of 1051 non preeclamptic women 8.08%.

Table 2 showed a detailed frequency distribution of factors associated with severe preeclampsia, showing that more maternal risky age to be found in severe preeclampsia group (57,6%) similarly to nulliparity dominantly found in the preeclampsia group (51,8%) while mothers with a history of hypertension accounted for 27.1% in preeclampsia group and multiple pregnancies was 4.7% in those with severe preeclampsia group.

Based on table 3 the persentage respondents who had maternal risky age for severe preeclampsia (57,6%) is greater compare to respondents who didn't had severe preeclampsia (25,9%).

Statistical analysis showed there was a significant association between maternal age with severe preeclampsia incidence ($p$ = 0,000). From the analysis we knew that risky maternal age was 3,989 times more likely to develop preeclampsia compare to unrisky maternal age.

This is agreed with a study by Nursal (2015) at Hospital M. Djamil which also found most of respondents were at risky age which was 55,9% in case group and 20,6 % in control group and p value 0,006 and OR=8,3 which means mother with risky age 8,3 times more likely to develop severe preeclampsia compare to non risky mother.

Another study by Langelo (2013) showed maternal's age >20 and ≥35 were 3.37 times more likely develop preeclampsia with p value 0,000 which statistically means there was a significant relationship between maternal age with severe preeclampsia incidence.

But different findings found by Kashanian study in 2011 which showed that risky maternal age has no relationship with severe preeclampsia with p value 0,75 and OR =0,9 which means mothers with advanced age >31 years old is 0,9 times more likely to develop severe preeclampsia compare to younger mother (<31 years old).

This is agreed based on theory in Cunningham et al (2014) which stated that maternal age <20 or > 35 years old is more at risk for complication during pregnancy which bad for both mother and fetus. Maternal age <20 years old, the uterine size is not normal yet, so the likelihood of complication in pregnancy become greater. While maternal age >35 years old there is degeneration process which leads to structural and functional changes in peripheral blood vessels which responsible for increased of blood pressure and making it more likely to experience preeclampsia.

Based on the results of this study that risky maternal age is more likely to develop preeclampsia. Maternal age <20 years and> 35 years will affect maternal health in pregnancy and childbirth. It is therefore very important for mothers to know a safe age for pregnancy and to know various risks of pregnancy at such risky ages. Therefore, it is important to prepare for a safe age during pregnancy to avoid maternal complications including preeclampsia

Table 3 also showed that the percentage of respondents in the nulliparous mother group who experienced severe preeclampsia (51.8%) was higher than those without preeclampsia (32.9%).Statistical analysis showed a significant relationship between maternal parity with the incidence of severe preeclampsia (p = 0,020). From that it is known that nulliparous mother has a probability of 2,185 times to experience severe preeclampsia compared with multiparous mother

This finding is in agreement with the finding of others. Astrina's study (2015) in Panembahan Bantul Hospital concluded that there was a significant relationship between nulliparity with the incidence of preeclampsia with OR = 2,999 which means the probability of nulliparous mother is 2,999 times to develop preeclampsia compared with multiparous mother. Study by Indriani (2011) which revealed nulliparous mothers is 1.222 times more likely to develop preeclampsia and Afridasari study (2013) which concluded there was a significant relationship between the status of gravida with the incidence of ssevere preeclampsia with OR = 2,881 which means nulliparous mother were 2,881 times to develop preeclampsia than multiparous mother. But

**Tabel 3 : Factors Related with the Incidence of Severe Preeclampsia at Hospital DR M. Djamil Padang**

| Dependent Variables | | Case | | Control | | OR (95% CI) | *p value* |
|---|---|---|---|---|---|---|---|
| | | f | % | f | % | | |
| Maternal age | <20 years &>35 years old | 49 | 57,6 | 22 | 25,9 | 3,898 (2,038-7,456) | 0,000 |
| | 20-35 years old | 36 | 42,4 | 63 | 74,1 | | |
| | Total | 85 | 100 | 85 | 100 | | |
| Parity | Nulliparity | 44 | 51,8 | 29 | 34,1 | 2,185 (1,174-4,065) | 0,020 |
| | Multiparity | 41 | 48,2 | 56 | 65,9 | | |
| | Total | 85 | 100 | 85 | 100 | | |
| History of hypertension | Yes | 23 | 27,1 | 7 | 8,2 | 4,134 (1,665-10,263) | 0,003 |
| | No | 62 | 72,9 | 78 | 91,8 | | |
| | Total | 85 | 100 | 85 | 100 | | |
| Multiple pregnancy | Yes | 4 | 4,7 | 6 | 7,1 | 0,650 (0,177-2392) | 0,746 |
| | No | 81 | 95,3 | 79 | 92,9 | | |
| | Total | 85 | 100 | 85 | 100 | | |

these findings is contrary to Nursal study (2014) which concluded that multiparous mothers are more at risk for preeclampsia than nullipara mothers

Young and nulliparous women are particularly vulnerable to experience preeclampsia, and the incidence of preeclamptic women between 3 to 10 percent. different from multiparous women with fewer incident percentages. (Cunningham, 2014). In theory, nulliparous woman is more at risk

to develop preeclampsia than multiparous woman because preeclampsia usually occurs in women who are first time exposed to chorionic villi. This occurs because in those women the immunologic mechanisms of blocking antibody formation performed by HLA-G (human leukocyte antigen G) to placental antigen have not been fully formed, so the process of trophoblast implantation into the mother's desidual tissue becomes disturbed. Nulliparous woman is also vulnerable to stress during labor which will stimulate her body to produce cortisol. The effect of cortisol is to improve the sympathetic response, so that cardiac output and blood pressure will also increase (Irianti, 2013).

Therefore, both multiparous and nulliparous woman should have counseling for contraception to a professional health worker in order to control the number of births, as to prevent and avoid the risk of preeclampsia.Based on table 3 it can be seen that the percentage of respondents who had history of hypertension who experienced severe preeclampsia (27.1%) more than respondents who did not experience severe preeclampsia (8.2%).

The Result of statistical analysis showed a significant relationship between history of maternal hypertension with severe preeclampsia incidence (p = 0,003). From the analysis it is seen that mothers with a history of hypertension had a likelihood 4.134 times to develop severe preeclampsia compared with mothers with no history of hypertension before.

This study is in agreement with Radjamuda study (2014) which concluded that women with prior hypertension history were at risk for preeclampsia with p value 0.02 which means there was a significant relationship between history of hypertension with severe preeclampsia. Similarly, the results of Moghadam study conducted in Iran in 2012 revealed that there was a significant relationship between mothers with a history of chronic hypertension with the incidence of severe preeclampsia and p value 0.001 and OR = 3.17 which means women with a history of hypertension 3.17 times to develop severe preeclampsia compared with normotension women.

Hypertension is a disorder of the blood vessels that result interference in oxygen supply and nutrients carried by the blood obstructed to the body tissues that need it. In general, hypertension is an asymptomatic state, where high blood pressure in the arteries can leads to increased risk for cardiovascular-related diseases such as stroke, renal failure, heart attack, and kidney damage (Widyaningrum, 2012).

A history of chronic hypertension, previous hypertensive vascular disease or essential hypertension is risk factors for the incidence of preeclampsia (Poston et al., 2006). Thus, the likelihood of having preeclampsia will increase in women with a history of chronic hypertension, because the placental blood vessels have been impaired. Therefore, mothers with a history of hypertension should be alert as early as possible for preeclampsia with optimal antenatal care.From table 3 it can be seen that the percentage of respondents in the multiple pregnancy group who experienced severe preeclampsia (4.7%) was less than those who did not have severe preeclampsia (7.1%).

The results of statistical analysis showed there was no significant relationship between multiple pregnancy with severe preeclampsia (p = 0,744). With OR = 0.650 or OR value <1 which means OR protective risk is caused because the percentage of multiple pregnancy is less in case group than control group.

This is in agreement with Andriani's study in 2009 revealed that there was no significant relationship between multiple pregnancies and the incidence of preeclampsia with OR = 1,460 and Hanum's study in 2013 concluding that there was no significant association between multiple pregnancies and severe preeclampsia. However, the results of this study differed from a multicentre study by Sibai in 2000 revealed that women with multiple pregnancies were more likely to have gestational hypertension and preeclampsia.This is not in agreement with the theory that preeclampsia is more common in multiple pregnancies, this is because the increase of placental mass in multiple pregnancies can lead to an increase in circulating levels of tyrosine kinase-1,

which is antiangiogenic circulating in the origin of the placenta, and may play an important role in the pathophysiology preeclampsia. (Magee, Dadeelszeen et al, 2016)

In this study there was no relationship between multiple pregnancies and severe preeclampsia. This may be due to the small frequency distribution of multiple pregnancy in both groups and may also be due to the frequency distribution of multiple pregnancy mothers who did not develop preeclampsia is more than frequency distribution of multiple pregnancy mothers with preeclampsia.

## CONCLUSION

Risky maternal age <20 years and> 35 years, nulliparity, and history of hypertension were found to be associated with severe preeclampsia incidence in this study. Therefore it suggested for health workers, especially midwives to increase the frequency of counseling either personal or group regarding the impact and prevention of preeclampsia for mothers and early detection for all pregnant women to avoid maternal complications such as preeclampsia and can refer them as soon as possible

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# The Differences in Academic Achievement Between Bidikmisi and Non-Bidikmisi Students of Midwifery Bachelor Degree Students at Faculty of Medicine Universitas Andalas

**Hardisman[1], Lusiana Elsinta Bustami[2], Nora Maghfiroh Nurholis[3]**

*[1] Departmen of Medicine Community Science, Faculty of Medicine , Universitas Andalas, Padang, Indonesia*
*[2-3] Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
hardisman@med.unand.ac.id[1]

**Abstract**

Bidikmisi ministration is given to prospective students who have good academic potential but not capable in economic status. Bidikmisi students have different obligations and rights with non-bidikmisi students. This makes students' academic achievement in lectures different. There are many factors that affected academic achievement, both internal and external factors. This research aims: to examine the differences in academic achievement between bidikmisi and non-bidikmisi students of midwifery bachelor degree students at Faculty of Medicine Universitas Andalas. This research was quantitative research by using comparative cross sectional study design that had been conducted of midwifery bachelor degree students at faculty of medicine Universitas Andalas from February to September 2018. The sample of this reasearch was students from 2014 to 2016 generation that stand by 76 students who has fulfilled inclusion criteria. The researcher used questionnaire and KHS in collecting data. The data analysis was using univariate and bivariate. The results showed that 42.1% of bidikmisi students and 65.8% of non-bidikmisi students had high academic achievement. The results of the bivariate analysis shows that there were differences in academic achievement between bidikmisi and non-bidikmisi students (p-value = 0.038). There are differences in academic achievement between bidikmisi and non-bidikmisi students. Factors that influence differences in academic achievement are interest and academic stress levels.

**Keywords** : Academic Achievement, Bidikmisi, Non-Bidikmisi

## INTRODUCTION

Education is a means for someone to develop their potential so that they can improve their quality. Education is a conscious and planned effort to realize a learning atmosphere and learning process so that students actively develop the potential needed for themselves, society, nation and country. Every citizen has the same rights to obtain quality education and get the opportunity to improve life-long education (UU No. 20 Tahun 2003). The Indonesian government has a strategy that is by providing assistance to bidikmisi education costs for every citizen who is not economically able to get acces to education, especially higher education.

The bidikmisi program is one of the Indonesian government's flagship programs in the field of education. Bidikmisi aims to increase access and learning opportunities in universities for students who have good academic achievement but are not economically capable. Up to 2017 there were more than 432,409 students who had received Bidikmisi tuition assistance. The number of applicants in the bidikmisi program every year shows a very significant increase (Kemenristekdikti, 2018).

The implementation of the Bidikmisi program in Indonesia has several problems, one of which is the student achievement index. Student achievement index is obtained through an assessment of the learning process (Permenristekdikti No.44 2015). Assessment of students' academic performance will be carried out periodically in each semester and announced at a predetermined time. The results of the assessment of learning achievement in each semester are stated in the Semester Achievement

Index (IPS). The results of the assessment of the learning achievement of graduates at the end of the study program are stated in the Grade Point Average (GPA) (Peraturan Rektor Unand No.3 of 2016).

Academic achievement obtained by each student is influenced by various factors, one of which is psychological factors. Psychological factors are factors that originate within the individual that have a major influence on the learning process. Every individual has a different psychological condition, this causes a difference in the learning outcomes achieved. Psychological factors consist of motivation, attitude, interest and stress (Syah, 2010; Karwono, 2017). In line with research conducted by Fransisca (2016) which states that internal factors that influence academic achievement are psychological factors.

Midwifery Bachelor Degree Students at Faculty of Medicine Universitas Andalas is the first S1 midwifery study program on the island of Sumatra and third in Indonesia (S1 Kebidanan FK Unand, 2017). The results of the initial study of the cumulative achievement index (GPA) of 20 people consisting of bidikmisi and non-bidikmisi student groups in Midwifery Bachelor Degree Students at Faculty of Medicine Universitas Andalas were as many as 20% of bidikmisi students and 60% of non-Bidikmisi students had a high GPA.

Each student has a psychological condition that is not the same as each other so that the academic achievements achieved are also different. In addition, more responsibility and demands on bidikmisi students compared to non-bidikmisi students can also affect academic achievement. This is illustrated by the results of the initial survey of students in the Midwifery Bachelor Degree Students at Faculty of Medicine Universitas Andalas who have almost the same factors and approaches to learning methods but have different GPA achievements.

## II. METHODS

This research is a quantitative analytic study with themethod *cross sectiona comparativel study*. The sample of this study was divided into 2 groups (n1: bidikmisi students; n2: non-bidikmisi students) and all members of the population who met the inclusion criteria and did not meet the exclusion criteria taken as samples. Data collection involved 76 respondents in the Midwifery Bachelor Degree Students at Faculty of Medicine Universitas Andalas by filling in students' questionnaires and study results (KHS) card collection. Data were analyzed by univariate and bivariate using *Chi-Square* (*p-value* ≤0.05).

## III. RESULTS

### Univariate Analysis

**Table 1. Frequency Distribution Characteristics of Respondents**

| Characteristics Respondents | Bidikmisi | | Non-Bidikmisi | |
|---|---|---|---|---|
| | f (n=38) | % | f (n=38) | % |
| **Year of Entry:** | | | | |
| 2014 | 15 | 39,5 | 15 | 39,5 |
| 2015 | 15 | 39,5 | 15 | 39,5 |
| 2016 | 8 | 21,1 | 8 | 21,1 |
| **Entry Path:** | | | | |
| SNMPTN | 26 | 68,4 | 16 | 42,1 |
| SBMPTN | 12 | 31,6 | 19 | 50,0 |
| Mandiri | 0 | 0,0 | 3 | 7,9 |
| **Priority Study Program:** | | | | |
| Pilihan 1 | 18 | 47,4 | 14 | 36,8 |

| | | | | |
|---|---|---|---|---|
| Pilihan 2 | 11 | 28,9 | 17 | 44,7 |
| Pilihan 3 | 9 | 23,7 | 7 | 18,4 |

Respondents in this study were mostly from the 2014 generation (39.5%) and 2015 (39.5%). Most of the bidikmisi students (68.4%) were accepted through the SNMPTN pathway and as many as 50.0% of non-bidikmisi students were accepted through the SBMPTN pathway. The priority of study program selection by Bidikmisi students showed that 47.4% chose midwifery bachelor degree as the first choice, while 44.7% non-Bidikmisi students chose midwifery bachelor degree as the second choice.

**Table2. Frequency Distribution of Academic Achievement of Bidikmisi and Non-Bidikmisi Students S1 Midwifery Program**

| Academic Achievement | Bidikmisi | | Non-Bidikmisi | | Total | |
|---|---|---|---|---|---|---|
| | f (n=38) | % | f (n=38) | % | f(n=76) | % |
| Low | 22 | 57,9 | 13 | 34,2 | 35 | 46,1 |
| High | 16 | 42,1 | 25 | 65,8 | 41 | 53,9 |

A total of 42.1% of Bidikmisi students of the Midwifery Bachelor Degree Students at Faculty of Medicine Universitas Andalas have high academic achievement, this number is less than the non-Bidikmisi students who have academic achievement the high is 65.8%.

**Table 3. Distribution of Frequency of Motivation, Attitude, Interest and Academic Stress of Bidikmisi and Non-Bidikmisi Students Study Program of Midwifery**

| Variabels | Bidikmisi | | Non-Bidikmisi | | Total | |
|---|---|---|---|---|---|---|
| | f (n=38) | % | f (n=38) | % | f (n=76) | % |
| **Motivation :** | | | | | | |
| Low | 16 | 42,1 | 11 | 28,9 | 27 | 35,5 |
| High | 22 | 57,9 | 27 | 71,1 | 49 | 64,5 |
| **Attitude :** | | | | | | |
| Poor | 32 | 84,2 | 24 | 63,2 | 56 | 73,7 |
| Good | 6 | 15,8 | 14 | 36,8 | 20 | 26,3 |
| **Interest :** | | | | | | |
| Low | 31 | 81,6 | 19 | 50,0 | 50 | 65,8 |
| High | 7 | 18,4 | 19 | 50,0 | 26 | 34,2 |
| **Academic Stress :** | | | | | | |
| Low Stress | 6 | 15,8 | 15 | 39,5 | 21 | 27,6 |
| Medium Stress | 28 | 73,7 | 21 | 55,3 | 49 | 64,5 |
| Weight Stress | 4 | 10,5 | 2 | 5,3 | 6 | 7,9 |

Most of the bidikmisi students (57.9%) and non-bidikmisi students (71.1%) have high learning motivation. In addition, only a small percentage of Bidikmisi students (15.8%) and non-bidikmisi students (36.8%) had good learning attitudes. Most bidikmisi students (81.6%) have low learning interest, while non-bidikmisi students have the same frequency between those who have low interest (50%) and have a high interest (50%). Most of the bidikmisi students (73.7%) and non-bidikmisi students (55.3%) experienced moderate stress.

**Bivariate Analysis**

**Table 4. Differences in Academic Achievement of Bidikmisi and Non-Bidikmisi Undergraduate Midwifery Students**

| Status Beasiswa Bidikmisi | Academic Achievement | | | | *p-value* |
|---|---|---|---|---|---|
| | Low | | High | | |
| | f | % | f | % | |
| Bidikmisi | 23 | 57,9 | 15 | 42,1 | 0,038 |
| Non-Bidikmisi | 13 | 34,2 | 25 | 65,8 | |
| **Total** | 36 | 47,4 | 40 | 52,6 | |

Percentage of Bidikmisi students who have high academic achievement (42.1%) is smaller than non-bidikmisi students (65.8%). Based on statistical tests obtained *p-value* ≤0.05 (*p*= 0.038), meaning that there are differences in academic achievement between bidikmisi and non-bidikmisi students.

**Tabel 5. Differences in Motivation of Bidikmisi and Non-Bidikmisi Undergraduate Midwifery Students**

| Status Beasiswa Bidikmisi | Motivation | | | | *p-value* |
|---|---|---|---|---|---|
| | Low | | High | | |
| | f | % | f | % | |
| Bidikmisi | 16 | 42,1 | 22 | 57,9 | 0,338 |
| Non-Bidikmisi | 11 | 28,9 | 27 | 71,1 | |
| **Total** | 27 | 35,5 | 49 | 64,5 | |

Percentage of Bidikmisi students who have high learning motivation (57.9%) is smaller than non-bidikmisi students (71.1%). Based on statistical tests obtained *p-value* >0.05 (*p*= 0.338), meaning that there is no difference in the level of learning motivation between bidikmisi and non-bidikmisi students.

**Table 6. Differences in Attitudes of Bidikmisi and Non-Bidikmisi Undergraduate Midwifery Students**

| Status Beasiswa Bidikmisi | Sikap | | | | *p-value* |
|---|---|---|---|---|---|
| | Poor | | Good | | |
| | f | % | f | % | |
| Bidikmisi | 32 | 84,2 | 6 | 15,8 | 0,068 |
| Non-Bidikmisi | 24 | 63,2 | 14 | 36,8 | |
| **Total** | 56 | 73,7 | 20 | 26,3 | |

Percentage of Bidikmisi students who have unfavorable learning attitudes (84.2%) is greater than non-bidikmisi students (63.2%). Based on statistical tests obtained *p-value* >0.05 (*p*= 0.068), meaning that there are no differences in attitudes in learning between bidikmisi and non-bidikmisi students.

**Tabel 7. Differences in Interest of Bidikmisi and Non-Bidikmisi Undergraduate Midwifery Students**

| Status Beasiswa Bidikmisi | Interest | | | | *p-value* |
|---|---|---|---|---|---|
| | Low | | High | | |
| | f | % | f | % | |
| Bidikmisi | 31 | 81,6 | 7 | 18,4 | 0,008 |
| Non-Bidikmisi | 19 | 50,0 | 19 | 50,0 | |
| **Total** | 50 | 65,8 | 26 | 34,2 | |

Percentage of bidikmisi students who have a high learning interest (18.4%) is smaller than non-bidikmisi students (50.0%). Based on statistical tests obtained *p-value* ≤0.05 (*p*= 0.008), meaning that there are differences in learning interests between bidikmisi and non-bidikmisi students.

**Tabel 8. Differences in Academic Stress of Bidikmisi and Non-Bidikmisi Undergraduate Midwifery Students**

| Status Beasiswa Bidikmisi | Academic Stress | | | | *p-value* |
|---|---|---|---|---|---|
| | Low | | Medium and Weight | | |
| | f | % | f | % | |
| Bidikmisi | 6 | 15,8 | 32 | 84,2 | 0,040 |
| Non-Bidikmisi | 15 | 39,5 | 23 | 60,5 | |
| **Total** | 21 | 27,6 | 55 | 72,4 | |

Percentage of bidikmisi students who had moderate and severe academic stress (84.2%) was greater than non-bidikmisi students (60.5%). Based on statistical tests obtained *p-value* ≤0.05 (*p*= 0.040), meaning that there are differences in the level of academic stress between bidikmisi and non-bidikmisi students.

## IV. DISCUSSION

### Student Academic Achievement

Academic achievement is the result achieved by students in the learning process in college. Student academic achievement in general is influenced by internal factors and external factors (Darmadi, 2017). In this study, as many as 42.1% of Bidikmisi students of Midwifery Bachelor Degree Students at Faculty of Medicine Universitas Andalas have high academic achievement while 65.8% of non-bidikmisi students have high academic achievement with achievement index 3.00. Non-bidikmisi students tend to have higher academic performance compared to Bidikmisi students. Based on statistical tests obtained *p-value* ≤0.05 (*p*=0.038), meaning that there are differences in academic achievement between bidikmisi and non-bidikmisi students.

Research conducted by Sucahyo (2014) found differences in academic achievement between bidikmisi students and non-bidikmisi students with p = <0.001. This study shows different results, namely the academic achievement of bidikmisi students is higher than the academic achievement of non-Bidikmisi students. Students who obtain bidikmisi scholarships get more motivation in learning and improve learning achievement.

The results of other studies conducted by Takriyuddin (2016) showed that the average learning achievement achieved by bidikmisi students was greater than that of non-bidikmisi students. The average academic achievement of bidikmisi students was 3.40 while the average academic achievement of non-Bidikmisi students was 3.29. The research conducted by Mahmudah (2016)

found that the average academic achievement of bidikmisi students in the third semester was 3.47, this value was higher than the average academic achievement of non-bidikmisi students, namely 3.15.

Darmadi (2017) states that academic achievement is a measure of a person's success in undergoing a learning process that is determined by various factors. Differences in achievement of learning achievement between bidikmisi students and non-bidikmisi students are caused by various factors that can come from within themselves such as motivation, level of intelligence, interest, and learning attitudes as well as from outside the students such as the environment around students.

Non-Bidikmisi students who get better academic achievement can be caused by the need to get better grades and the desire to get a scholarship during college. This is different from Bidikmisi students who have received a full scholarship from the beginning of the lecture until the end of the college period, provided that the Bidikmisi students must be able to maintain their academic achievements. Other factors that affect the academic achievement of bidikmisi students are lower than non-bidikmisi students, one of which is the student admission path. Most of the Bidikmisi students in this study (68.4%) were accepted through the SNMPTN pathway, namely national selection using school report cards that allowed students who did not meet the academic requirements, while the majority of non-Bidikmisi students (50.0%) were accepted through the SBMPTN namely national selection with written test methods and skills tests to ensure students who graduate are students with good academic abilities.

**Student Motivation**

The results of the study on all respondents showed that 35.5% of respondents had low learning motivation and 64.5% of respondents had high learning motivation. Data on the bidikmisi group obtained a percentage of 57.9% had high learning motivation and only 42.1% had low motivation. Most non-bidikmisi students (71.1%) also have high learning motivation and only 28.9% have low learning motivation.

Bailey and Philips (2015) in their study explained that intrinsic motivation is closely related to personal satisfaction and influences academic achievement, extrinsic motivation is related to rewards or praise that will be obtained and shows a slight relationship with academic achievement, whereas amotivation or unmotivated states are significantly related with low achievement. The final goal that each student wants to achieve is high academic achievement so that he can complete the lecture period well. Good academic achievements during lectures are considered to be able to help students prepare for their careers after graduating from college.

The motivation that has the highest influence is intrinsic motivation. Intrinsic motivation encourages someone to do something to achieve personal satisfaction (Vallerand *et al*, 1992). Based on statistical tests obtained *p-value* > 0.05 ($p$= 0.338), meaning that there is no difference in the level of learning motivation between bidikmisi and non-bidikmisi students. Most of the bidikmisi and non-bidikmisi students in this study have high motivation in achieving high academic achievement.

Bidikmisi and non-bidikmisi students in this study have intrinsic motivation for learning which can be judged by the feeling of pleasure because they can absorb the explanation from the lecturer during the lecture and feel the need to learn new things related to midwifery material. Most

respondents agreed that they must succeed during the lecture. The success rate of students during the lecture period can be measured through achievement of academic achievement in the form of a GPA. In addition, extrinsic motivation also influences student learning activities. Most respondents in this study also agreed that they needed to get good grades in order to get a prestigious job in the future.

The learning motivation of bidikmisi students comes from the obligation as a recipient of bidikmisi scholarships that must be fulfilled during the course, one of which is having good academic achievement. Non-Bidikmisi students also have high motivation to study because they feel the need to get good academic achievement. Non-Bidikmisi students with good academic achievement can take the selection to get various types of scholarships during the lecture period.

**Student Attitudes**

Based on the research it was found that the majority of respondents (73.7%) had a bad attitude and only 26.3% had a good learning attitude. Data on the bidikmisi and non-bidikmisi groups found that only 15.8% of Bidikmisi students had good learning attitudes while 84.2% had poor learning attitudes. Non-Bidikmisi students had a good learning attitude and 63.2% had poor learning attitudes. Most of the respondents resigned to their inefficiencies in learning, had a feeling of being afraid of being wrong so that they did not contribute to lectures and did not take lectures seriously.

Research conducted by Oroujlou and Vahedi (2011) found that a person's intelligence and talents accompanied by unfavorable learning attitudes will not show progress on achievement. Conversely, if accompanied by a good attitude in the learning process will have a positive impact on the achievement achieved.

Based on statistical tests obtained *p-value* > 0.05 ($p$= 0.068), meaning that there are no differences in attitudes in learning between bidikmisi and non-bidikmisi students. Learning attitudes of bidikmisi and non-bidikmisi students tend to be poor. Poor learning attitudes in most respondents can be caused by various things such as learning difficulties and boredom.

Most of the respondents in this study stated that they had the wrong feeling of fear that caused a feeling of lack of courage to solve problems in front of the class and discuss in a study group and feel unprepared when facing an exam. Based on this, it was concluded that the learning difficulties experienced by most respondents were a lack of confidence. Ilangga's (2014) research shows that there is a relationship between self-confidence and learning achievement. Self-confidence is one's view of one's own abilities which makes him more positive about himself and his environment. Low self-confidence in learning can be caused by a lack of knowledge and social support from people around. Lack of confidence will lead to a negative attitude.

Some respondents feel bored during the learning process. Students often do not pay attention to lecturers' explanations when they are tired and sleepy and most students are not eager to do assignments. This shows that there is a sense of boredom experienced by students during the learning process, causing a negative attitude response when learning. The results of the research by Awe and Benge (2017) state that teaching methods that do not develop students' thinking ability will cause boredom.

Negative attitudes or poor attitudes when learning will affect the academic achievement that will be achieved. Bidikmisi and non-bidikmisi students need to pay attention to attitudes in learning. The

attitude that needs to be improved in learning is to foster the courage to express opinions and discuss in class, pay attention to lecture material seriously, always read books related to lectures and do assignments well.

**Student Interest**

Based on research on all respondents, a percentage of 65.8% of respondents had low interest and only 34.2% of respondents had high learning interest. The results of the research on bidikmisi and non-bidikmisi groups found that only 18.4% of bidikmisi students had a high interest in learning and as many as 81.6% had low learning interest. Non-Bidikmisi students have a balanced percentage of those who have a high learning interest (50.0%) and have a low learning interest (50.0%).

According to Darmadi (2017) someone has an interest in learning indicated by the feeling of enjoying learning, active participation in learning activities and giving greater attention during learning activities. Active participation in learning affects academic achievement.

Based on statistical tests obtained *p-value* <0.05 (*p*= 0.008), meaning that there are differences in learning interests between bidikmisi and non-bidikmisi students. Bidikmisi students tend to have lower learning interest than non-bidikmisi students.

Mustamin's research (2013) shows that most students (76.5%) have high learning interest. Learning interest influences student academic learning achievement. The high level of student interest can be seen from the number of students who choose majors because of their own desires and students explore the course material because they feel the benefits for themselves.

The results of the analysis on priority study of study program selection when attending college admission selection found that as many as 47.4% of Bidikmisi students chose Midwifery Bachelor Degree Students at Faculty of Medicine Universitas Andalas in the first choice, this result is greater than non-bidikmisi students who choose Midwifery S1 study program in the first choice, namely as much as 36.8%. These results indicate that interest in the selection of study programs is not in line with the interests of learning. This can be caused by a new student admission system that can affect the choice of prospective study program priority students.

Interest will affect someone's attitude in learning. Differences in learning interests between bidikmisi and non-bidikmisi students can be seen in the attitude when learning such as active participation when the lecture takes place. Bidikmisi students tend to ask lecturers less questions and are often sleepy when the lecture process takes place compared to non-bidikmisi students. Feelings of fear of being wrong, lack of confidence and resignation to incompetence can cause Bidikmisi students to show less active participation in lecture activities. Some respondents said that they didn't like midwifery too much because this was not their own choice and not their ideal. This shows that a sense of not being interested in an activity will reduce one's interest in the activity.

**Student Academic Stress**

The results showed that 27.6% of respondents experienced mild academic stress, concluded that only a small percentage of students were able to adapt to lectures. Meanwhile, the highest percentage were students who experienced moderate academic stress, namely 64.5% of respondents and 7.9% of respondents who experienced severe academic stress. Denovan and Macaskill's (2016)

study showed that stress levels had a significant effect on academic performance (p = 0.007). Students have lower stress levels after being able to adapt to various stress exposure. Various causes of stress on students due to different demands at any given time in life.

The results of the research on the bidikmisi and non-bidikmisi groups were 84.2% of bidikmisi students experienced moderate and severe academic stress and only 15.8% experienced mild academic stress. As many as 60.5% of non-bidikmisi students also experienced moderate and severe academic stress and 39.5% experienced mild academic stress. Based on statistical tests obtained *p-value* ≤0.05 (*p*= 0.040), meaning that there are differences in the level of academic stress between bidikmisi and non-bidikmisi students. Moderate and severe academic stress is more experienced by bidikmisi students than non-bidikmisi students.

The cause of academic stress felt by most bidikmisi students is a feeling of anxiety not being able to finish college work well and many things related to lectures occur out of control. College assignments that are not completed properly will affect student academic judgment. Bidikmisi students feel the need to achieve high academic achievement and maintain it.

Non-Bidikmisi students do not have binding obligations as for bidikmisi students due to responsibility for their scholarship status. Bidikmisi scholarship recipients have the obligation to have high academic achievement and actively participate in the tri dharma of higher education. This is related to bidikmisi students who often feel that difficulties in their lectures accumulate very much and they feel unable to overcome them. Bidikmisi students are prone to experience academic tension compared to non-bidikmisi students. These more demanding causes Bidikmisi students experience more moderate and severe academic stress than non-bidikmisi students.

## V. CONCLUSION

1. Most bidikmisi students have lower academic achievement compared to non-bidikmisi students.
2. More than half of Bidikmisi students have high motivation, a small percentage have good learning attitudes, a small percentage have high learning interest and most experience moderate and severe academic stress. Most non-bidikmisi students have high motivation, less than half have good learning attitudes, some have high interest and more than half have moderate and severe academic stress.
3. There are differences in academic achievement between bidikmisi and non-bidikmisi students. Non-Bidikmisi students have higher academic achievement than Bidikmisi students.
4. There were no differences in motivation and attitudes between bidikmisi and non-bidikmisi students, but there were differences in interests and academic stress levels for bidikmisi and non-bidikmisi students.

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# Relationship Education, Knowledge And Attitude To The Use Of Mow Contraception Method On Family Planning Acceptor In The Work Area Of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017.

**Ermawati [1], Lusiana Elsinta Bustami[2], Novi Aulia Driza[3]**

[1]*Department of Obstetrics and Gynecology, RSUP DR M. Djamil, Faculty of Medicine, Universitas Andalas, Jl. Perintis Kemerdekaan Padang, Indonesia*
[2]*Bachelor of Midwifery, Faculty of medicine, Universitas Andalas, Padang, Indonesia*
[3]*Bachelor of Midwifery, Faculty of medicine, Universitas Andalas, Padang, Indonesia*
ermawati@gmail.com[1]

**Abstract**

Background Woman Operative Method (MOW) is a permanent contraception performed by cutting off both oviducts thus blocking ovum encounters with sperm cells. The use of MOW contraception in the work area of Lubuk Buaya Community Health Center of Koto Tangah Sub-District from 2013, 2014, 2015 and 2016 decreased significantly from 3.4%, 2.2%, 2.09% to 1.5%. This study aim to know the factors related to the use of MOW contraception method on Family Planning acceptor in the work area of Lubuk Buaya Community Health Center of Koto Tangah Sub-District Padang year 2017.

The type of research used is observational analytics with comparative cross sectional study approach. The sample in this research is as much as 120 respondents (60 cases and 60 control). The sampling technique is consecutive sampling. Instrument data retrieval is through questionnaire. Statistical test uses chi-square test bivariat analysis with a significant level of 95%.

The results showed that there was a correlation between education factor (p=0,002), and attitude (p= 0,001), while knowledge (p= 0.974) did not have a significant relationship with the use of MOW contraception method in the work area of Lubuk Buaya Community Health Center of Koto Tangah Sub-District Padang year 2017.

Education, and attitudes have relation with the selection of MOW contraception in the Work Area of Lubuk Buaya Community Health Center of Koto Tangah Sub-District padang year 2017. It is expected that the health officers need to be moreproactive in giving counseling and promotion about the advantages of MOW Family Planning to society

**Keywords** : Acceptor KB, Operative Methods Women

## INTRODUCTION

The high population in the world and in Indonesia would be an issue that should receive serious attention from various sectors of its one of the administration. Government programs that have been implemented so far is the Family Planning program. Family Planning (FP) is the effort to regulate the child's birth, the distance and the ideal age gave birth, birth control, through the promotion, protection, and assistance in accordance with the reproduction rights to create quality family. Target execution planning programs are couples of reproductive age (Kemenkes RI, 2015)

Based on Medium-Term DevelopmentPlan 2014-2019, Indonesia has one of its development priorities in the field of family planning family planning services is increasing with the use of LTM to reduce the risk of *drop-out* or the use of non-LTM (BKKBN, 2016).

Contraception is derived from the counter which is to resist or fight, while the conception refers to the formation of a zygote. Contraception is an attempt to prevent pregnancy. That effort can be temporary, can also be permanent. Contraceptive use is one of the variables that affect fertility (Prawirohardjo, 2008).

The intended use of contraception is the provision of support and consolidation of the idea of family planning acceptance Norma Small Family Happy Prosperous as well as a significant decrease in birth rates (Pinem, 2009).

Methods Operative Women is a permanent contraception which is performed by an action on both the oviduct so that hinder meeting the egg (ovum) by a sperm (sperm) (Mochtar, 2011), indicated in women who have severe disease and chronic that will become more severe if the woman is pregnant again (Yuhedi and Titik, 2013), while the contraindication is pregnancy, vaginal bleeding unexplained, systemic infection or pelvic acute, should not undergo the surgery, and less certain about his desire for fertility in the future (Affandi, 2013).

Advantages MOW use them very effective, does not affect breastfeeding, do not depend on factors intercourse, and no long-term side effects. For the loss should be considered permanent nature of this contraceptive method, the client may regret in the future, the risk of minor complications, discomfort after the procedure, do not protect against STDs, including HBV and HIV / AIDS (Affandi, 2013).

As for matters related to the choice of contraception MOW namely:

1. Education

is the process of changing attitudes and behavior of a person or group of people in a through teaching and training efforts (Priyoto, 2014). Based on its level education track is divided into into:

a. basic education primary schools and madrasah shaped, ibtida'iyyah (MI) or other equivalent form, as well as junior and Madrasah tsanawiyah (MTS) or other equivalent forms of

b. secondary education is a continuation of basic education, consisting of high school, vocational school or other forms equivalent

c. higher education is secondary education which includes educational programs diploma, bachelor's, master's, specialist and doctoral organized by the college

2. Knowledge

Knowledge or cognitive domain is very important for the formation of actions of a person *(oventbehavior).* Sufficient knowledge domain in kognitif has 6 levels that knows, comprehension, application, analysis, synthesis and evaluation (Wawan and Dewi, 2010).

The knowledge level may affect the receipt of FP methods. The knowledge of family planning programs included on the different types of contraception would make community participation in the program of the higher (Tedjo, 2009).

3. Attitude

Attitude is a reaction or response which was still closed from a person to a stimulus or object. can be either positive attitude and can also be negative.

a. A positive attitude is a tendency of approaching, please, expect a certain object.

b. Negative attitudes there is a tendency to avoid, avoid, hate, do not like a particular object of Indonesia in 2015, the number of participants totaled 23,361,189 (BKKBN, 2015). The number of couples of reproductive age in Padang is 172 055 people, while the number of new family planning participants are 9.62% and 65.55% of active family planning participants. This amount consists of acceptors LTM ie IUD participants amounted to 8.11%, 0.27%, 1.53% MOW, and Implant 5.60%,

while the non-LTM acceptors ie 6.40% of participants Condoms, Injectable 56 , 70%, and Pil 24 131 21.40% (DKK, 2016).
The number of family planning acceptors MOW in Padang decreased from 3.4% in 2013 to 1.5% in 2016 (Padang Health Office, 2016). PHC Lubuk Buaya, a health center with a number of family planning acceptors most namely 36 661 people, but acceptors with the method of MOW is still low compared to other methods in the Puskesmas is as much as 0,006%, whereas the majority of acceptors have been eligible for MOW, ie over the age of 35, the number of parity over 2 and the youngest child was 2 s old, sure has had a large family in accordance with the will, understand and voluntarily, and the relationship with her husband and family harmony (BKKBN, 2014).
Based on the above, the researcher is interested in conducting research on "Relationships Education, Knowledge and Attitude by use of MOW contraception method on family planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017''

## METHODS

This research is an analytic observational with approach *comparative cross sectional* of the 120 respondents acceptors divided into groups *case* and *control* are located in the *Work area of Lubuk Buaya Community Health Center of Koto Tangah Sub-District* in November 2016 and November 2017. Data collection was performed by administering a questionnaire containing respondent characteristics, exposure to information, knowledge, attitudes and support for her husband to use methods MOW contraception. All data were processed using SPSS with *chi-square* test.

## RESULTS

This study was conducted to acceptors and Non-MOW MOW. Respondents who participated in this study was 120 people who were divided into two groups, *case* and control.

**Educational factors, Knowledge, Attitude**

**Table 1. Frequency Distribution Factors Education, Knowledge And Attitudes To The Use Of MOW Contraception Method On Family Planning Acceptor In The Work Area Of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017**

| Variable | f (n = 120) | (% ) |
|---|---|---|
| **Education** | | |
| High | 21 | 17.5 |
| Medium | 57 | 47.5 |
| Low | 42 | 35.0 |
| **Knowledge of** | | |
| Good | 40 | 33.3 |
| Enough | 49 | 40.8 |
| Less | 31 | 25.8 |
| **Attitude** | | |
| Positive | 63 | 52.5 |
| Negative | 57 | 47.5 |

According to table 1 shows that of the 120 respondents (60 respondents group *case* and group of 60 *the control* respondents)found the majority of respondents with secondary education, as many as 57 people (47.5%), the level of knowledge pretty much 49 (40.8%) and a positive attitude, as many as 63 people (52.5%).

**Relationship Education with the Use of MOW Contraception Method**

**Table 2. Relationship Education with the Use of MOW Contraception Method**

| Education | Contraceptive Use | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | MOW | | Non MOW | | | | |
| | f | % | f | % | f | % | |
| High | 12 | 57.1 | 9 | 42.9 | 21 | 100 | |
| Secondary | 36 | 63.2 | 21 | 36.8 | 57 | 100 | |
| low | 12 | 28.6 | 30 | 71.4 | 42 | 100 | 0.002 |
| **Total** | 60 | 50 | 60 | 50 | 120 | 100 | |

Based on table 2 show that acceptors MOW more with secondary education compared to high or low education. Meanwhile acceptors not MOW more with lower education compared to higher education and secondary education. Statistical test results obtained *p value* = 0.002 (P <0.05) means that there is a significant relationship between education and the use of MOW contraception method on family planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017.

**Relationship Knowledge with the Use of MOW Contraception Method**

**Table 3. Relationship Knowledge with the use MOW Methods Contraceptive**

| knowledge | Contraceptive Usage | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | MOW | | Non MOW | | | | |
| | f | % | f | % | f | % | |
| Good | 20 | 50 | 20 | 50.0 | 40 | 100 | |
| Self | 25 | 51 | 24 | 49.0 | 49 | 100 | |
| Less | 15 | 48.4 | 16 | 51 6 | 31 | 100 | 0,974 |
| **Total** | 60 | 50 | 60 | 50 | 120 | 100 | |

Based on table 3 shows that acceptors MOW more with enough knowledge compared with either knowledge or lack of knowledge. Meanwhile acceptors not MOW more with less knowledge than the knowledge of good and sufficient knowledge. Statistical test results obtained *p value* = 0.974 (P <0.05) means there is no significant relationship between knowledge and use of MOW contraception method on family planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017.

**Relationship Attitude with the Use of MOW Method Contraception**

**Table 4. Relationship Attitude with the Use of MOW Method Contraceptive**

| Attitudes | Contraceptive Use | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | MOW | | Non MOW | | | | |
| | f | % | f | % | f | % | |
| Positive | 41 | 65.1 | 22 | 34.9 | 63 | 100 | |
| Negative | 19 | 33.3 | 38 | 66.7 | 57 | 100 | 0,001 |
| **Total** | 60 | 50 | 60 | 50 | 120 | 100 | |

Based on table 5showed that MOW acceptors shows that more with a positive attitude compared with a negative attitude. Meanwhile acceptors not MOW more with negative attitudes compared with a positive attitude. Statistical test results obtained *p value* = 0.001 (P <0.05) means that there is a significant relationship between attitudes to the use of MOW contraception method on family

planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017.

## DISCUSSION

### Relationship Education with the Use of MOW Contraception Method

Statistical test results obtained *p value* = 0.002 (p <0.05), means there is a significant relationship between education and the use of MOW contraception method on family planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017.

Research conducted by Hadi (2010) in Japan Desa Pakis, Holy obtained relationship between the mother's education level and the contraceptive MOW. A total of 58.9% of respondents have secondary education and 41.1% of respondents have primary education. This is possible because the consciousness of Japanese respondents in Desa Pakis, Kudus about the importance of education has been well supported by adequate educational facilities and infrastructure that is high school in Japan Desa Pakis, Holy so that respondents have many opportunities to continue their education to high school.

In contrast to the results of research conducted by Herlinawati *et al* (2012) at the Hospital Dr. Pirngadi Medan stating there was no correlation between maternal education with the election of MOW contraception. Low education (primary and junior) choose MOW 73.3% compared to the highly educated (old high school Higher Education) of 26.7%, this means that high or even low levels of education one does not influence the selection of the methods of contraception because most respondents MOW choosing MOW is with low education.

The education level affects the selection of respondents to contraceptive use. The better the education of respondents more easily absorb the available information conveyed by health workers so that they can accurately determine the choice of contraceptive use. People who are educated enough then pehaman against his health is also good, so it can reduce morbidity and prolong life (Priyoto, 2014).

Education respondents in this study relates to the use of contraceptive methods MOW, proved the difference in the education level of family planning acceptors with acceptors not MOW MOW, according to the theory, which states that the higher education respondents more easily absorb the available information conveyed by health workers so that they can precisely determine the choice of contraceptive use. Respondents who have a good education, more carefully decide what is good contraceptive use in accordance with the condition of his body, so as to better safeguard their reproductive health.

### Relationship Knowledge with the Use of MOW Contraception Method

Statistical test results obtained *p value* = 0.974 (P <0.05) means there is no significant relationship between knowledge and use of MOW contraception method on family planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017.

Results this research is in line with research conducted by Verawaty (2013) note that there is no correlation between knowledge with the election of LTM (MOW). They have the flexibility or freedom of choice by considering such things as suitability, effectiveness of the choice, convenience and safety of the side effects of contraceptives, also in choosing the appropriate services and complete. In contrast to research conducted by Tunau K *et al* (2016) in Sokoto State of Nigeria, there is a relationship between knowledge with the use of modern contraceptives.

Knowledge and birth control and family planning is a prerequisite of the proper use of contraceptive methods in a way that is effective and efficient (BPS, 2012). Through good knowledge of

contraception, can certainly provide opportunities to choose contraception properly and correctly in accordance with the purpose of family planning (Asih and Hadriah, 2009).
Knowledge and birth control and family planning is a prerequisite of the proper use of contraceptive methods in a way that is effective and efficient (CBS, 2012). Through good knowledge of contraception, can certainly provide opportunities to choose contraception properly and correctly in accordance with the purpose of family planning (Asih and Hadriah, 2009).
Knowledge of the respondents in this study MOW contraceptive method is still relatively poorly. This lack of knowledge can be seen from respondents include: the majority of respondents did not know what MOW contraception method, the purpose of contraception MOW almost all respondents answered terminate the pregnancy. While only some of the respondents who answered that the purpose of contraception MOW is to terminate the pregnancy. Thus the need to increase knowledge related acceptors MOW contraception method.

**Relationship Attitude with the Use of MOW Method Contraception**

Statistical test results obtained *p value* = 0.001 (P <0.05) means that there is a significant relationship between attitudes to the use of MOW contraceptive methods acceptors in the work aea of Lubuk Buaya communiy health cener of Koto Tangah SUb-District Padang, year 2017.
The results this is in line with research conducted by Trisnawati (2011), stating that there is a relationship between attitudes to the use of contraceptives LTM, but different to that done by Verawaty (2013), it was found that there was no difference between respondents who are positive by respondents were negative towards LTM use contraceptive methods.
In accordance with the opinion of Allport (1954) in Notoadmojo (2010), which explains that the attitude it has three components, namely: trust (confidence), the idea and concept of the object, the emotional life or the evaluation of people towards the object and tendency to act*(trend to* behave), the three components of the above jointly form a unified stance*(total attitude).*In determining this whole attitude, knowledge, thought, belief and emotion holds important perenan.
Attitude is a collection of feelings, beliefs, and the tendency to behave relatively long. Good taste or delight in an object will show a positive attitude towards the object and vice versa displeasure and not good, it will show a negative attitude (Yulizawati, 2012).
Attitude is closed reaction or response to stimuli or objects (Notoadmojo, 2010). Enclosed response in this case is against contraceptive methods MOW. Acceptors contraception MOW more going on acceptors with a positive attitude compared with a negative attitude, so if the attitude of acceptors is positive towards contraception MOW, then he will receive and positive outlook on contraception MOW so inclined to agree to participate become family planning acceptors MOW, whereas if acceptors negative attitude towards contraception MOW he will refuse MOW contraception and tend to not want to participate into MOW acceptors.

## CONCLUSIONS

Most respondents with secondary education, have a sufficient level of knowledge, and have a positive attitude about use of MOW contraception method on family planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017.
There is a significant relationship between education and attitudes to the use of MOW contraception method on family planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang Year 2017.
There was no relationship between knowledge to the use of MOW contraception method on family planning acceptor in the work area of Lubuk Buaya Community Health Center Of Koto Tangah Sub-District Padang 2017.

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# CORRELATION OF CALCIUM LEVELS WITH THE STRENGHT OF UTERUS CONTRACTION ON THE ACTIVE PHASE OF FIRST STAGE LABOR

**Joserizal Serudji [1], Meilinda Agus[2], Novia Rita Aninora[3]**

[1] *Department of Obstetric and Gynecology, Dr. M. Djamil Padang Hospital*
[2]*Departmen of Diploma Midwifery Program, Poltekes Kemenkes Padang, Padang, Indonesia*
[3]*Bachelor of Midwifery, Faculty of Medicice, Universitas Andalas, Indonesia*
joserizalserudji@gmail.com[1]

**Abstract**

Contributing factor to uterus contraction mechanism is the imbalance of the extracellular calcium level. When extracellular calcium level is inadequate, response of the myometrium to oxytocin decreased and the calcium influx inter-cell membranes are suppressed, thus inhibit uterine contractions. The aim of this research is to know the correlation between levels of calcium and the strength of uterine contraction in the active phase of first stage labor. This was a cross-sectional analytic correlative study in the Dr. Rasidin Hospital Padang and UPTD Health Laboratory in West Sumatra province, in was conducted from November 1st, 2014 till February 2016. Sampling was takes by using non probability sampling with consecutive sampling. Subjects of this research were the active phase of first stage labor of 62 people. Kolmogorof Smirnov normality test was used to the normality of the data. Pearson correlation test was conducted to examine the correlation between dependent and independent variables. Mean levels of calcium in the the stage I of labor respondents active phase (8.94 ±0,71), while mean strength of uterine contractions in active phase of first stage labor(56.77±11,84), there was positive correlation (r = 0,62) between the levels of calcium in the strength of uterine contractions ($p < 0.05$). The conclusion of the study there was a significant correlation between the levels of calcium in the strength of uterine contractions.

**Keywords** : Calcium Levels, The Stage I of Labor Active Phase , The strength of uterine contractions

## INTRODUCTION

The process of childbirth and labor is influenced by five factors, namely the passenger in the form of the fetus and placenta (passanger), the factor of birth (passage) strength (power) which includes uterine contraction, maternal position, and psychological response. If this factor is in good condition, healthy and balanced then the labor process will take place normally / spontaneously (JNPK-KR, 2008).

Data from the West Sumatra Provincial Health Office shows that there is a decrease in the incidence of maternal deaths, although it is still relatively high. Based on the latest data published, in 2013 maternal deaths in West Sumatra were 90 people, lower than the previous year in 2012 as many as 99 people and in 2011 as many as 129 people. Maternal mortality was caused by haemorrhage (32%), eclampsia (14%), prolonged labor (12%), infection (11%), abortion (14%), heart disease (5%), and others (12% ) Maternal bleeding occurs due to placental retention, severe anemia, prolonged labor, and others (City Health Profile, 2013).

At Rasidin Padang Hospital, the period 1 January 2013 - 31 December 2013 contained 265 deliveries. Most deliveries occur in the 1st parity (42%), with normal parturition occurring at 58%. Primiparious will increase the risk of prolonged labor by 2 times compared to multiparous women.

The duration of parturition is the highest incidence at the age of 19-34 years, and in the first parity of all long-term labor events (Medical Record of Rasidin Hospital, 2013).

The cause of the death of 1 in 3 mothers in West Sumatra is prolonged labor, namely labor that lasts more than 24 hours. Problems must be identified and addressed before the 24 hour deadline is reached. Most of the old parturition shows an extended of first stage. The main cause of prolonged labor is cephalopelvic disproportion, malpresentation and malposition and inefficient uterine work, including a stiff cervix. Prolonged labor can lead to haemorrhage in either labor women or postpartum women. Besides that, in long-term baby babies can also cause asphyxia, which is the biggest cause of infant mortality in West Sumatra (Mariati et al. 2011).

Hypotonic uterine inertia or hypotonic uterine inertia causes labor to cease and the fetus is displaced due to its abnormality in the mother's uterus, in the form of inadequate force to open the cervix or push the fetus out. One of the causes of his disorder is anemia that occurs during pregnancy (Smith, R, 2007).

A 2009 Lartey study found estrogen was able to trigger higher contractility in single fibers of the uterine muscle by increasing the number of oxytocin receptors and α-adrenergic agents which modulate the calcium channel membrane. Estrogen is also very necessary in intracellular communication by increasing connexin 43 synthesis and the formation of gap junctions in the myometrium. This condition allows to produce coordinated uterine contractions. In addition estrogen also stimulates the production of prostaglandins F2α (PGF2α) and prostaglandin E2 (PGE2α) which stimulates uterine contractions (Linda, J. 2008; Lartey, J, at, el 2009)

A decrease in the concentration of ionized calcium inhibits the myometrial response to oxytocin, with no response to this when calcium levels have been reduced in the myometrium. Conversely, the increase in calcium ion concentration will increase the work of oxytoxin in producing uterine contractions (Mcalpine, J.M, 2015)

The use of calcium with exogenous oxytocin is commonly given to women giving birth and routinely given in clinical cases of primary uterine inertia. Decreasing the availability of physiologically active calcium plays an important role in the pathogenesis and strong uterine contractions dependent on freely ionized calcium into myometrial cells. This is supported clinically, that uterine inertia in childbirth can be stimulated by intravenous administration of calcium gluconate, although the amount of serum calcium is in the normal range (Hollinshead, F.K, at, el.2010).

Calcium levels will increase the level of amplitude and coordination of silent uterine contractions in the trial of ewes and rabbits. It is also determined that the minimum effective dose of exogenous oxytocin produces greater results when given with or after calcium compared to oxytocin alone. (Wray, S, 2007).

Romero's (2006) study concluded that primiparous women are more at risk of complications of pregnancy and childbirth, because the experience of childbirth has never been, then the possibility of abnormalities and complications is quite large both in the strength of his (power), birth canal (passage), and the condition of the fetus (passager). Less information about childbirth can also affect the labor process by extending the duration of labor and increasing the incidence of labor by action, namely labor with cesarean section (OR 0.36, 95% CI) and vacuum extraction (OR 4.5 CI 95%).

Research purpose:

a. To determine the mean level of calcium in labor during the active phase
b. To find out the mean strength of uterine contractions in labor during the active phase
c. To determine the correlation of calcium levels with the strength of uterine contractions in labor during the active phase

## METHODS

The type of research used is analytic with cross sectional research design. The research was carried out in the midwifery room and the laboratory of RSUD Dr. Rasidin Padang and at the UPTD West Sumatra Provincial Health Laboratory Center. The study was conducted from 10 November 2014 to 30 February 2016. The population in this study was all parturients came to give birth in the midwifery room of Rasidin Hospital, Padang, with consecutive sampling technique. Samples taken based on criteria (1) Parties when active phase (opening 3 - 5 cm) with intact membranes (2) Fetus live, single, presentation behind head (3) Age of gestational age (4) Pregnancy and childbirth without complications and complications.

Every primiparous mother who came to the Maternity Hospital Rasidin Padang Hospital who met the criteria for admission to the research sample was asked to agree to be included in the study with written informed consent. The mother is given a full explanation of the purpose, benefits and procedure of the study. After giving birth giving consent to be included in the study anamnesis was prepared with a prepared questionnaire. Blood collection is assisted by officers (labor officers, midwives or nurses). The patient is in a sleeping position and not in a contraction state, 3 ml of venous blood is taken, then the spruit is labeled with the patient's identity. To bring the research sample to the UPTD of the West Sumatra Provincial Health Laboratory, the sample was put in an ice box containing dry ice to keep the sample frozen. Measurements were made using Direct colorimetric complexometric test (Arsenazo III). Measurements of uterine contractions were evaluated for 10 minutes in the phase of maximal dilatation using carditocography (CTG). All examinations were carried out by the person in charge of the room in charge. The reading of the results of the contraction amplitude recording will be requested for help from a gynecological obstetric specialist.

## RESULT

This research was conducted in November 2014 to April 2016, the results of the study were as follows:

In table 5.1 it can be seen that the average age of respondents is in the healthy reproductive age range (27.69 ± 7.02 years), based on the average parity of respondents parity (2.15 ± 1.55 people), for the mean gestational age respondents are in the range term of gestational age (38.55 ± 1.12 weeks), while the mean duration of delivery of respondents was in the normal timeframe (7.65 ± 2.27 hours). Statistical test results showed that the age of the respondent, the number of pregnancies of gestational age and length of labor showed no significant differences (p = 0.00, p = 0.0.23, p = 0.29, p = 0.25).

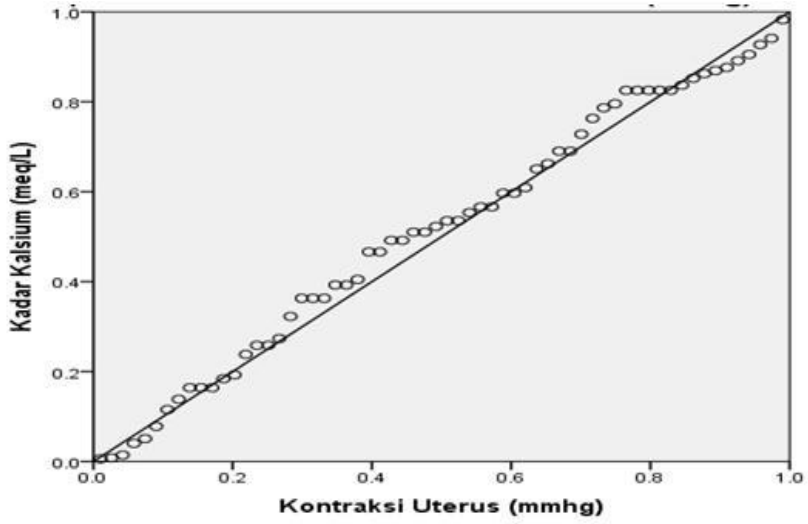
Based on the picture In table 5.1 shows the correlation between calcium levels with uterine contractions where the value of r = 0.619 there is a relationship between calcium levels and uterine contractions and has a positive direction with the closeness of the relationship of 0.384. Based on statistical tests showed that there are between levels of calcium with uterine contractions where the value of p = 0.000 <0.05. This means, that the better the calcium level, the stronger the uterine contraction

**Table 1 Characteristics of Research Subjects**

| | Characteristics | N | % |
|---|---|---|---|
| 1. | Age (Year old) | | |
| | < 20 | 7 | 11,29 |
| | 20-35 | 42 | 67,74 |
| | >35 | 13 | 20,97 |

| | | | |
|---|---|---|---|
| | Mean±SD | 27,69 ± 7,02 | |
| 2. | Paritas (orang) | | |
| | 1 | 31 | 50 |
| | 2-4 | 24 | 38.71 |
| | >4 | 7 | 11.29 |
| | Mean±SD | 2,15 ± 1,55 | |
| 3. | Gestational Age (weeks) | | |
| | 37 | 14 | 22,58 |
| | 38 | 17 | 27,42 |
| | 39 | 14 | 22,58 |
| | 40 | 17 | 27,42 |
| | Mean±SD | 38,55 ± 1,12 | |
| 4. | Labor time (Hours) | | |
| | < 5 | 7 | 11,29 |
| | 5 – 12 | 53 | 85,49 |
| | > 12 | 2 | 3,22 |
| | Mean±SD | 7,65 ± 2,27 | |

Gambar 1 Scatter Plot hubungan kontraksi uterus dengan kadar kalsium




**DISCUSSION**

The purpose of the discussion is to interpret The analysis shows that there are 42 mothers who have age in the non-risk category (20-35 years) and there are 20 mothers who have age in the risk category (<20 and> 35 years), ρ Value obtained from this analysis is 0.09 . The results of the analysis showed that almost half of mothers who have age in the risk category, theoretically age has a relation to the incidence of uterine atony.

According to Prawiroharjo (2009) high-risk pregnancies can arise in conditions of four too (too young, too old, too much, too close). In the risky age group that is <20 years> 35 years and the age group is not at risk or mild risk is 20 years to 35 years. His abnormality is often related to young

women and nullipara, maternal age has a contribution to prolonged parturition, because it can cause both maternal and fetal pain (Cunningham, 2013).

On average, mothers who are very young (less than 20 years) do not have enough knowledge about the nutritional needs of a pregnant woman. In addition, mothers who are too young are in dire need of more nutrition.

Mother's age is too old (more than 35 years) so there will be a lot of risks that you might face related to her health condition. Mothers who are too old, physiologically experience decreased organ function such as weakness of the uterine muscles and their contractions. This is what makes the organs more sensitive, especially if there is a collision in the mother's uterus. Bleeding is a possible thing. Bleeding that is too often certainly results in increased nutritional needs of Mother and baby.

The results of this study are in line with the results of the study of Adillia L, Et, al (2006) where age characteristics did not differ in the group of mothers with hypotonic uterine compared to non hypotonic uteri. Fatima's (2013) study found that the mean age of respondents in the hypotonic uterine group was 24.76 + 6.12 years compared to the mean age of respondents in the non-hypotonic group at 24.30 + 4.95 years. Statistically there were no significant differences between age in the hypotonic uterine group or not hypotonic.

Parity is one of the factors associated with the incidence of uterine inertia. Parity affects the duration of labor and the incidence of complications. In mothers with primipara because of the experience of childbirth has never been, the abnormalities and complications experienced are quite large, such as labor dystocia and also lack of information about childbirth affecting the labor process. Premature labor is more common in the first pregnancy. The occurrence will be reduced by the increase in the number of parity that is sufficiently months up to the fourth parity (Krisnadi et al. 2009). This means there is a relationship between parity and uterine atony..

Mulyani (2014) states that most respondents who have parity ≥ 3 times more at risk of developing dystocia 24 times greater than respondents who have parity <3 times. In this study obtained the fastest delivery time of 4 hours and the longest 13 hours, with an average of 7.83 ± 2.49. Most distribution in 9 working hours (18.8%). The longer the labor, will cause harmful effects for the mother and child. The severity of the injury continues to increase with the length of work, the risk increases rapidly after 24 hours. An increased incidence of uterine atony, lacerations, bleeding, infection, maternal fatigue and shock. A high birth rate exacerbates the danger to mothers (Oxorn, 2010).

The results showed that the average calcium level was 8.94 ± 0.71 and the average uterine contraction was 56.77 ± 11.84, the Pearson correlation test between calcium levels and uterine contraction (r) 0.61 showed a relationship that positive and significant between levels. calcium with uterine contractions ($p < 0.05$). Regression test also shows a strong relationship ($r^2$) of 0.38.

Gao's research, L.at, el (2009) states that low calcium intake in pregnant women shows a lack of calcium levels is one of the causes of uterine inertia. Calcium is an important component of the diet which is an important regulator of the process of regulating blood vessel function.

Another supporting study is a study by Adillia L, Et, al (2006) that studies serum levels of calcium and magnesium in patients with more hypotonic and without hypotonic uterine inertia, suggesting that patients with serum calcium levels ≤ 8.5 mg / dL, risk Hypotonic uterine inertia during childbirth is 4.17 times higher than serum calcium levels> 8.5 mg / dL.

Fomin VP, at.el (2006) states that subclinical hypocalcaemia may have a large effect on normality and parturition progression. Changes in the function of calcium, metabolism and absorption during pregnancy and birth have a contribution such as the physiological state thereby inhibiting the mother's process of giving birth.

Wattimury, at.el. (2013) also showed that the total serum levels of calcium and calcium ions in hypotonic uterine inertia were lower than the levels present in normal labor. The strength of smooth muscle contraction depends largely on the level of extracellular calcium.

The basis of the mechanism of uterine contraction is a change in electrical activity. The electric potential difference between the plasma membrane (potential membrane) because of the unequal distribution of ions between intra and extra cells. This condition occurs because of the large amount of negatively charged intracellular biomolecules that cannot escape and selective plasma membrane canals. The ions will move in a direction determined by differences in concentration and membrane potential (City, S. K, At, el 2013, Mcalpine, J. M, at, el, 2015)

In this study found 16 respondents with the amplitude of uterine contractions of more than 60 mmHg with normal calcium levels limits, whereas 10 respondents with calcium levels less than normal had normal amperage contraction amplitude. Theoretically, if the level of calcium levels in the blood is too low it will stimulate the parathyroid hormone and cause intracellular calcium ion levels to increase, which will cause the smooth muscle cells of the blood vessels to hyperactive against suppressing substances so that peripheral vascular resistance increases. (Guyton, 2008).

Based on studies conducted by Fischer at, el (2005) suggesting the use of misoprosol for cervical ripening versus control there were visible differences, these women tended to give birth within 48-96 hours and not performed cesarean section (RR 0.85, 95% confidence interval (CI) 0.58-1.25, 11 trials, 594 women). Misoprostol works by increasing intracellular free calcium.

## CONCLUSION

Based on the results of the study, it was concluded that the mean calcium level in the first respondent in the active phase (8.94 ± 0.71) mg / d, the mean strength of uterine contractions in the first respondent in the active phase (56.77 ± 11.84) mmhg , there was a significant positive correlation between calcium levels and the strength of uterine contractions ($p < 0.05$).

From the results of research that has been done can be suggested as follows, it is necessary to provide information to pregnant women about the role and needs of calcium during pregnancy along with the provision of calcium supplements for mothers during pregnancy and increased calcium intake in daily meals with various foods that contain high calcium.

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# THE EFFECT OF YOGA ON THE FIRST STAGE LENGTH OF CHILDBIRTH AT BIRU PUBLIC HEALTH CENTRE OF BONE REGENCY, SOUTH SULAWESI

**Nurqalbi Sampara[1], Jumrah Sudirman[2], Sumarni Mawang[3], Rahayu Eriyanti[4], Fadjriah Ohorella[5]**

*[1-5a]Midwife Profession Study Program Midwifery and Nursing Faculty of Megarezky University, Indonesia*
*[b]Midwifery Study Program, Midwifery and Nursing Faculty of Megarezky University, Indonesia*
nurqalbisr@gmail.com[1]

**Abstract**

Yoga in pregnant has a benefit to keep emotional and physical health.This research aimed to know the effect of Yoga on the first stage length of childbirth at Biru public health centre of Bone regency 2018. Method of research was quasy experimental design. Population of research was all pregnant women at Biru Public Health Centre of Bone Regency. Sample was part of all preganant women who fulfill criteria of inclusive and exclusive as many as 30 respondents. The result of research showed that 15 respondents were as sample including 13 respondents (86.7%) were normal to the first stage length of childbirth and 2 respondents (13,3%) were abnormal to the first stage length of childbirth. While, not all respondents followed Yoga. Four respondents (26.7%) were normal to the first stage length of childbirth and 11 respondents (73,3%) were abnormal. By using chi-square, it was obtained that *p*-value =0.003 is smaller than $\alpha = 0,05$. It meant that H0 was rejected and Ha was accepted. Therefore, there is the effect of yoga on the first stage length of childbirth.It is expected that midwive conduct each care based on midwifery care so that midwives can identify cases and conduct action fast and accurate especially expedite the first stage childbirth

**Keywords** : Yoga, First Stage Length of Childbirth

## INTRODUCTION

Childbirth is a process of fetal expenditure that occurs in post-term pregnancy (37-42 weeks) spontaneous birth with a percentage of the back of the head, without complication of both mother and fetus(1,2). Childbirth affects mother's condition, where the length of childbirth will make mother's emotional increase so that she feels anxiety and fear. It can also cause fatigue and increase mother's perception of pain(3,4)**.**

According to World Health Organization (WHO), maternal mortality rate in the World reached 289,000 people, divided into several countries including the United States of America reaching 9300 people, North Africa 179,000 people and Southeast Asia 16,000 people in 2015. Maternal Mortality Rate (MMR) in Southeast Asian countries such as Malasya (39 / 100,000 KH), Brunei (60 / 100,000) Vietnam (160 / 100,000 KH), and Singapore (3 / 100,000 KH) The number of MMR in Indonesia is still relatively high when compared to other Southeast Asian countries.

The lenght childbirth is childbirth that occur more than 24 hours on primigradiva, and more than 18 hours on multigradiva, which is one of several causes of maternal and newborn mortality. There are four stages that must be passed, namely the first, the second, the third, and the fourth stages of childbirth(5,6). The first stage of childbirth takes place between the opening of 0 (zero) to the complete opening (10cm). The first stage of childbirth consists of two phases, namely the latent phase and the active phase. The latent phase is the period from the beginning of childbirth to the

point when the opening starts progressively. The active phase is the beginning period of time from the active opening progress until the opening becomes complete(3,7)

Yoga is a practice technique to know yourselves so that you can analyze more about the thought and action that have been done. Exercise is done through attitude (asanas) and breathing (pranayama), and relaxation techniques so that they can develop natural intuitive intelligence and help the mind to be focused, and ultimately can make changes in the form of peace of mind and focused attention(8–10). It includes aspects of body attitude (asanas), breathing techniques (pranayama), meditation (dhayana), chanting (mantras) and wisdom teachings (sutra). To encourage health and relaxation. A systematic review of yoga is effective for reducing anxiety, depression, acute and chronic pain in the adult population without side effects(11,12). Yoga interference improves psychological health (anxiety, depression, stress) can improve the quality of life.

Based on the identification of problem and supported by literature review as a theoretical basis in arraging the research conceptual framework, it can be concluded that there are several effects related to yoga with the lenght of cildbirth in which independent variable investigated is yoga and dependent variable is the lenght of chilbirth.

## METHODS

This type of research was analytical research with using non equasival control group design experiment research method. There was one group that used for research, but divided into two groups, namely one group that was treated and another group was control group that it was not treated.

## RESULT

The research was conducted on May 2018 at Biru Public Health Centre of Bone Regency. This type of research was a quantitative experimental approach called quasy experimental research. Population of research was all pregnant women at Biru Public Health Centre 15: 15. Sample is part of the number of pregnant women who fullfill inclusion and exclusion criteria using purposive sampling technique.

1. **Characteristics of Respondents**
   a. **Characteristics of Respondents Based on Age**

**Table 4.1**
**Frequency Distribution Based on Respondents Characteristics Age at Biru Public Health Centre of Bone Regency 2018**

| Age | Frequency | Percentage (%) |
|---|---|---|
| <20 Years | 6 | 20,0 |
| 20 – 35 Years | 20 | 66,7 |
| 36 – 40 Years | 4 | 13,3 |
| **Total** | **30** | **100** |

Source : *Primary data, 2018*

Table 4.1 showed that from 30 respondents as sample, there were 6 people (20.0%) whose age <20.0 years, 20 people (66.7%) whose age of 20-35 years old and 4 people (13.3%) whose age of 36-40 years old.

**b. Characteristics of Respondents Based on Parity**

**Table 4.2**
**Respondents Distribution of Characteristics Frequency based on Parity at Biru Public Health Centre of Bone Regency 2018**

| Parity | Frequency | Percentage (%) |
|---|---|---|
| Primipara | 21 | 70,0 |
| Multipara | 9 | 30,0 |
| **Total** | **30** | **100** |

Source : *Primary data, 2018*

Table 4.2 described 30 respondents as sample. There were 21 respondents (70%) got primipara and 9 respondents (30.0%) got multipara.

**c. Characteristics of Respondents Based on Education**

**Table 4.3**
**Respondents Distribution of Characteristics Frequency based on Education at Biru Public Health Centre of Bone Regency 2018 2018**

| Education | Frequency | Percentage (%) |
|---|---|---|
| Elementary School | 2 | 6,7 |
| Junior High School | 11 | 36,7 |
| Senior High School | 14 | 46,6 |
| University | 3 | 10,0 |
| **Total** | **30** | **100** |

Source : *Primary data, 2018*

Table 4.3 described that from 30 respondents as sample, there were 2 respondents (6.7%) had graduated from elementary school, 11 respondents (36.7%) had graduated from junior high school, 14 respondents (46.6%) had graduated from senior high school and 3 respondents (10.0%) had graduated from university.

**1. Univariate Analysis**

**a. Frequency Distribution of Respondents Based on Yoga**

**Table 4.4**

**Respondents Distribution of Characteristics Frequency based on Yoga at Biru Public Health Centre of Bone Regency 2018**

| Yoga | Frequency | Percentage (%) |
|---|---|---|
| Yes | 15 | 50,0 |
| No | 15 | 50,0 |
| **Total** | **30** | **100** |

Source : *Primary data, 2018*

Table 4.4 described 30 respondents as sample. There were 15 respondents (50%) that did yoga and 15 respondents (50%) were not to do yoga.

**Tabel 4.5**

**Respondents Distribution of Characteristics Frequency based on Length of Childbirth at Biru Public Health Centre of Bone Regency 2018**

| First Stage Length of Childbirth | Frequency | Percentage (%) |
|---|---|---|
| Normal | 17 | 56,7 |
| Abnormal | 13 | 43,3 |
| **Total** | **30** | **100** |

Source : *Primary data 2018*

Table 4.5 showed 30 respondents as sample. There were 17 respodents (56.7%) that first stage length of childbirth was normal. Then, there were 13 respondents (43,3%) that first stage length of childbirth was abnormal.

**2. Bivariate analysis**

**Tabel 4.6**

**Effect of Yoga on the first stage length of childbirth at Biru Public Health Centre of Bone Regency 2018**

| Yoga | First Stage Length of Childbirth | | | | Total | | *P value* |
|---|---|---|---|---|---|---|---|
| | Normal | | Abnormal | | | | |
| | n | % | n | % | N | % | |
| Yes | 13 | 86,7 | 2 | 13,3 | 15 | 100 | 0.003 |
| No | 4 | 26,7 | 11 | 73,3 | 15 | 100 | |
| Total | 17 | 56,7 | 13 | 43,3 | 30 | 100 | |

Source : *Primary data 2018*

As decribed in Table 4.6, there were 13 respondents (86.7%) got normal and 2 respondents (13.3%) got abnormal in the first stage length of childbirth and did yoga.

Otherwise, there were 4 respondents (26.7%) who got normal and 11 respondents (73,3%) who got abnormal first stage length of childbirth and did not yoga.

By using the Chi-Square test, it was obtained $\rho = 0.003$ was smaller than $\alpha = 0.05$. This meanst that Ho was rejected and Ha was accepted. Thus there is an influence between yoga and the first stage length of childbirth.

## DISCUSSION

Childbirth is normal physiological. It is the process offetus movement, placenta, and membrane from the uterus through the birth canal (vaginal delivery). This process begins with the opening and dilation of the cervix as a result of uterine contractions with regular frequency, duration, and strength(1,7). The first strength that appears is small, then continue to increase until the peak of the opening of cervix is complete so that it is ready for the removal of the fetus from the mother's uterus. Yoga is a practice technique to know yourselves so that you can analyze more about thought and action that have been done(11).

The result of research showed that 15 women who did yoga including 13 respondents (86.7%) normal to the first stage length of childbirth and 2 people (13.3%) who were abnormal. While not all respondents did yoga. There were 4 people (26.7%) who were normal to the first stage length of childbirth and 11 people (73.3%) who were abnormal.

By using the Chi-Square test, $\rho = 0.003$ was smaller than $\alpha = 0.05$. This meant that Ho was rejected and Ha was accepted. Thus there is an effect between yoga and the first stage length of childbirth.

This result of research was in line with Shirley, et.al (2018) It showed The repeated-measures analysis of variance showed a significant difference in mental well-being scores ($p<0.001$) and state anxiety scores ($p<0.01$) within the group who received residential yoga training in a post-pre comparison (the sub-group, n=118). For between-group analysis, in the post comparison between yoga and control groups, there was a significant difference in mental well-being and state anxiety, while in the pre comparison there was a significant difference in state anxiety alone, which was higher in the control group. Comparisons were made with respective ‘pre’ States within a group. In the between-groups comparisons of the 2 groups, the post data and the pre data were compared separately(13).

This result of research in line with yasusuki (2016) are showed Analyses were performedusing IBM SPSS Statistics 23.0 for Windows (SPSS Inc., Chicago, IL, USA). Baseline characteristics were calculatedand presented as numbers and percentages or means and standard deviations, where applicable. Chi-square tests or Fisher’sexact tests were performed toassess differences in baseline characteristics for categorical variables andthe Mann-Whitney Utest was usedfor continuous variables(14).

Odds ratios (ORs) with 95% confidence intervals (CIs) for ritodrine hydrochloride use according to thepractice of prenatal yoga were estimate dusing logistic regression models. We developed 3 multivariat elogistic regression models for conducting adjustmentsusing the forced entry method. Model 1 adjusted for maternal age at delivery, participation area, parity, marital status, smoking, alcohol consumption, maternal education, pre-pregnancy BMI, employment status, physical activity level before pregnancy, intention to practice prenatal yoga ataround 15 weeks of gestation, and prenatal yoga class esheldat the prenatal care hospital as the base line covariates. Model 2 adjusted for the same variables in Model 1, as well asinfertility treatment, history ofpreterm delivery, history ofspontaneous abortion, malformation of uterus, chronic hypertension, diabetes mellitus, psychiatricillness, hypothyroidism, and autoimmune diseaseas covariates of complications ormedical history obtained during pregnancy.

Researchers assume that there were 2 respondents who did yoga but were abnormal with the length of childbirth. It was due to patients’ yoga cannot make movements with the specified duration of time so the length of childbirth was not normal. Whereas 4 respondents who did not do yoga but gave birth normally because they had previously given birth and the reproductive organs had previously been passed by the fetus so that it would easily go through the process of childbirth and breathing (pranayama), and relaxation techniques so as to develop natural intuitive intelligence and help the mind to be able to

focused, and it ultimately can make changes in the form of peace of mind and focused attention. Yoga includes aspects of body posture (asanas), breathing techniques (pranayama), meditation (dhayana), chanting (mantras) and wisdom teachings (sutra). To encourage health and relaxation. A systematic review of yoga is effective for reducing anxiety, depression, acute and chronic pain in the adult population without side effects. Yoga interference improves psychological health (anxiety, depression, pressure, stress). It can improve the quality of life, yoga in pregnancy combines special postures and techniques that are beneficial for pregnant women and help eliminate discomfort caused by body changes in pregnancy. The slanted resting posture is a modification of Savasana, the classical yoga reclining posture. Along with the supine fetal growth will be uncomfortable for pregnant women because the burden of the uterus will be more pressing into the lower spine and cause back / waist pain. The growing uterus will also push the digestive organs into the chest cavity causing shortness or hard of breath

## CONCLUSION

From the result of research on May 2018 at Biru Public Health Centre of Bone Regency to investigate the effect of yoga on the duration of first stage of childbirth, it was concluded that:

1. The result shows that from 30 respondents, there are 15 respondents (50%) that do yoga and 15 respondents (50%) are not to do yoga.
2. The result of research shows that from 30 respondents, There are 17 respodents (56.7%) that first stage length of childbirth was normal. Then, there are 13 respondents (43,3%) that first stage length of childbirth is abnormal.
3. There is an effect of yoga on the first stage length of childbirth at Biru Public Health Centre of Bone Regency.

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# THE RELATION BETWEEN HUSBAND SUPPORT WITH EXCLUSIVE BREASTFEEDING IN BABY AGE 6-12 MONTHS IN AIR DINGIN HEALTH CENTER

**Dr.dr.Yuniar Lestari,M.Kes,FISPH,FISCM[1], Bd. Lisma Evareny, MPH [2], Nurul Fitri[3]**

[1] *Department of Community Health Science, Faculty of Medicine Universitas Andalas Padang, Indonesia*
*2 Departmen of Diploma Midwifry, Poltekes Kemenkes Padang, Padang, Indonesia*
*[3]Departement of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*

yuniarlestari@med.unand.ac.id[1]

**Abstract**

Exclusive breastfeeding is one of ways to maintain a good growth and development for the baby. Exclusive breastfeeding in Indonesia is the right for every baby which is regulated in government regulations, but the coverage of exclusive breastfeeding is still low in some areas. The lowest exclusive breastfeeding coverage in Padang is in the working area of Air Dingin health center. The aims of this study is to determine the relationship between husbands support with exclusive breastfeeding in Air Dingin public health center.

This study was a quantitative study with cross sectional design conducted at Air Dingin health centerfrom Marchto December 2017. Subject of this studywere mothers who had 6-12 month babies whichwere106 people. Data was collected by using questionnaires and guided interviews. Data analysis was performed using univariate and bivariate using chi square test with p-value $\leq$ 0,05.

The results showed 76,4% of mothers did not provide exclusive breastfeeding for their babies and 59,4% of mothers did not get support from their husbands.Bivariate analysis showed that there was a relationship between husband support with exclusive breastfeeding with p-value=0.000.

There was a relationship between husband support with providing exclusive breastfeeding for the babies. Because of the importance of husbands role, husbands must be the target for exclusive breastfeeding counseling.Therefore, husbands can also be active to find the information and participate in the success of exclusive breastfeeding for the babies.

**Keywords** : exclusive breastfeeding, husbands support

## INTRODUCTION

International Confederation of Midwives (2011) states that one of ways to maintain good growth and development for baby is by breastfeeding. All the nutrients and energy baby needs during the first six months of birth can be fulfilledby the breast milk, the most optimal way to breastfeed the baby is by exclusive breastfeeding and supplementary feeding afterwards. Breastfeeding is a learning process and a natural process. In the implementation the mother needs active support in order to continue to maintain breastfeeding practices in her baby. One of the rights that have of mothers and families is to get accurate information about the benefits of breastfeeding and good breastfeeding management so that they get an idea of it and can make good decisions about what nutrients will be given to their baby.

United States Department of Agriculture (2002) suggested that fathers should be part of the breastfeeding team. There are several things that the father can do in breastfeeding teams such as, helping mothers complete work around the house, helping to keep the other child while the mother is breastfeeding the baby. If it is time to breastfeed a father or husband can also remind the mother and give

the baby to the mother for breastfeeding. Helps to get the something that a mother needs when she is breastfeeding.Praising mother, making something special that can make mother always feel happy and good. Husband's support can make mothers feel relaxed and comfortable in breastfeeding practices and can also build confidencethat mothers is able to breastfeed babies even in public places.

Exclusive breastfeeding regulation in Indonesia is ratified in the ASI PP No. 33 of 2012. This government regulation aims to ensure that every baby gets the right to the fulfilled of exclusive breastfeeding. Ensure that every mother gets protection in giving exclusive breastfeeding to her baby and improve the support role of each part around the mother such as mother's husband, mother's family, health personnel and others.

Breast milk is the best food that has the most suitable content with the state of the baby's digestive system. One of the digestive diseases that often attacks the digestive system is diarrhea. While diarrhea in Indonesia is still one of the contributors of morbidity and mortality because the high morbidity and mortality in babies caused by diarrhea. It was reported that besides hygiene and environmental sanitation breastfeeding is also one factor that can reduce morbidity caused by diarrhea (Ministry of Health RI, 2011).

Hector, King and Web (2005) divide there are factors that affect exclusive breastfeeding into several factors: maternal and infant health status, mother's knowledge, skills and attitudes, infant feeding, public health care, regulatory, socio-cultural, economic and environmental characteristics, sociodemographic characteristics of mothers and families, social structures and support (family support including mother husband), information from mass media, and breastfeeding related norms developed in the community.

Based on research conducted by Brown & Davies (2014) in the United Kingdom states that women who get strong social support from their husbands or partners have greater power in encouraging them to continue in breastfeeding to their babies. The study was conducted on 117 men whose partners had given birth in the past 2 years indicating that each father is eager to support their partner in breastfeeding the baby. But they feel marginalized in helping breastfeeding practices because they do not know what role they can play for helping their partners because of the minumum information they have about breastfeeding practices.

According to the Padang City Health Office 2016, inPadang city family support in exclusive breastfeeding is still relatively low, family support also includes husband support because the husband is the closest person to mothers who play a role during pregnancy, delivery and after birth, including exclusive breastfeeding .In Nainggolan (2014) appears that the support of husbands for wifein exclusivebreastfeeding amounted to 28.57%. This small support also shows in the results fromSartono&Utaminingrum(2012)research,from 62 wives husband support in breastfeedingis only about 22.6%.

Annual Report of Padang City Health office2016 edition reports that exclusive breastmilk coverage in Padang is 70.5%.This achievement is not reach the target of exclusive breastmilk that is 80%. There are only two public health center in Padang City that reach the target that isUlakKarang and Seberang Padang public health center and almost all the public health centers in Padang City did not reach the target. Air Dinginpublic health center is the area with the lowest exclusive breastmilk coverage in Padang City is 53.75%.

Based on this phenomenon, the researcher are interested to examine more about the presence or absence of the husbandssupport with exclusive breastfeeding in the work area of Air Dinginpublic health center in Padang city.

## METHODS

This study was a quantitative study with cross sectional design, thestudy conducted in work area of Air Dingin Health Center from March 2016 to December 2017. Respondents of this study wasmothers who had 6-12 month babies whichwere106 people.Data Collected by quistionnaire. Data analysis was performed using univariate and bivariate.

## RESULT

### Univariate Analysis

**Table1. Distribution of Exclusive Breastfeeding in the Working Area of Air Dingin Health Center**

| Exclusive Breastfeeding | Frequency (f) | Percentage (%) |
|---|---|---|
| Not Exclusive Breastfeeding | 81 | 76,4 |
| Exclusive Breastfeeding | 25 | 23,6 |
| **Total** | 106 | 100,0 |

Based on Table 1 shows that most of the respondents 81 of 106 respondents (76.4) did not give exclusive breastfeeding to their babies. Exclusive breastfeeding is when the baby is only givenbreast milk without any additional food such as water, formula, honey, tea, porridge, biscuits and other solid foods until the baby is six months old. According to experts breastfeeding benefits will increase during the first six months of life if the baby is only given breast milk.Increased breastfeeding is related to the duration of breastfeeding to the babyand the duration of breastfeeding after six months accompanied by complementary food (Roesli, 2012).

**Table 2 . Distribution of Husband Support in the Working Area of Air Dingin Health Center**

| Husband Support | Frequency (f) | Persentage (%) |
|---|---|---|
| Not Support | 63 | 59,4 |
| Support | 43 | 40,6 |
| **Total** | 106 | 100,0 |

Based on table 2 shows that more than half of respondents is 63 of 106 respondents (59.4%) did not get husband support. Husband support is needed to cultivate confidence of his wife. Husband is strongly encouraged to provide support and understanding of his wife so it will grow mutual understanding between husband and wife. More better support that provided by the husband will be higher the self-esteem wife in taking care of husband and child (Huliana, 2007).

**Table 3. The Relation Between Husband Support With Exclusive Breastfeeding In Baby Age 6-12 Months In Air Dingin Health Center**

| Husband Support | Exclusive Breastfeeding | | | | Total | | (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Not Exclusive Breastfeeding | | Exclusive Breastfeeding | | | | | |
| | f | % | f | % | f | % | | |
| Not Support | 59 | 93,7 | 4 | 6,3 | 63 | 100 | 14,080 (4,344-45,638) | 0,000 |
| Support | 22 | 51,2 | 21 | 48,8 | 43 | 100 | | |
| Total | 81 | 76,4 | 25 | 23,6 | 106 | 100 | | |

Based on Table 3 shows that the prevalence of mothers who did not give exclusive breastfeeding was more high for mothers who did not get husband support
(93.7%) than mothers who received husband support (51.2%).

Based on the statistical test, p-value (p = 0,000) shows that there is a significant relationship in exclusive breastfeeding between mothers who are not supported by husbands with mothers who have the

support of husbands. So it can be conclude that there is a relationship between the husbands support with exclusive breastfeeding in babies aged 6-12 months in the work area ofPuskesmas Air Dingin Padang City in 2017.

## DISCUSSION

The prevalence of mothers who did not give exclusive breastfeeding was more high for mothers who did not get husband support (93.7%) than mothers who received husband support (51.2%). Based on the statistical test, p-value (p = 0,000) shows that there is a significant relationship in exclusive breastfeeding between mothers who are not supported by husbands with mothers who have the support of husbands. So it can beconclude that there is a relationship between the husbands support with exclusive breastfeeding in babies aged 6-12 months in the work area ofPuskesmas Air Dingin Padang City in 2017.

Research by Ferawati (2013) inKelurahanGondoriyo Semarang that get the same result that there is a relationship between husband support with exclusive breastfeeding with p value = 0,000. According to research that has been done by Ferawati if the support provided by husband to mother is good then mother will be longer and happy to give breast milk to the baby. Husband's support will affect the mother's willingness to breastfeed and affect the duration of breastfeeding to the baby.

This study also has the same findings as research conducted by Ramadani (2010) in the work area of Puskesmas Air Tawarin Padang that there is a relationship between husband support with exclusive breastfeeding with p value = 0,020. Any support provided by the husband will affect the mother's emotional state that will affect the production ofmilk. Nurdiyan et al (2016) states that support from family and husband can be a psychosocial support for a person to avoid health problems that can come from anxiety someone. In this case means the family has an important role in the health of pregnant women such as supporting mothers to exclusive breastfeeding .

This study did not get the same results as a study conducted by Oktalina (2015) in the Working Areas of PuskesmasMengaluhJombangthat there is no relationship between husband support with exclusive breastfeeding with p value = 0.090. According to research conducted by Oktalina the father factor is not the only factor that can affect exclusive breastfeeding to baby but there are other factors that also support exclusive breastfeeding. Such as the support factor of health personnel and support from the mother's family. These factors have been excluded and do not become one of the variables in this study.

Research conducted by Hani (2015) also get different results that there is no relationship between husband support with exclusive breastfeeding with p value = 1.00. The difference in results is becauseof the lack understanding of mothers about breastfeeding and the mother’s fear if breast milk does not enoughto the baby’s needs and the false belief that babies need the other foodthan breast milk.

One way to exclusive breastfeeding runs smoothly requires good support from husbands and families. The husband can play a role and participate in supporting and assisting the work of the wife at home such as taking drinking water while the wife is breastfeeding the baby. Exclusive breastfeeding is in dire need of effort and good discipline from mothers, husbands and families.

The husband can also play a role in encouraging his wife to continue breastfeeding exclusively to her baby, reminding her wife to breastfeed the baby, giving praise to the wife for breastfeeding the baby well, so that will grow confidence and a great spirit for the wife to continue giving exclusive breastfeeding to the baby. The role and support of husband and the environment is very influential in providing support to the mother in taking care of her baby. The husband needs to understand the feelings and circumstances of his wife. This support will lead to positive attitudes and beliefs of the wife that the husband is there and ready to support it and struggle together in taking care of her baby (Indivara, 2009).

Government Regulation No. 33 of 2013 which regulates exclusive breastfeeding states that every baby has the right to receive exclusive breastfeeding from birth until sixmonths of age with regard to its growth and development. The government through the law provides protection to the mother for giving the exclusive breastfeeding to her baby. It takes a good role and support from family, community and government towards exclusive breastfeeding.

## CONCLUSION

1. Most of the respondents did not get husband support and most respondents did not give exclusive breastfeeding in the working area of Air Dingin Public Health Center in Padang 2017.
2. There is a significant relationship between husband support with exclusive breastfeeding in the working area of Air Dingin Public Health Center in Padang 2017.

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# DIFFERENCES OF ADOLESCENT REPRODUCTIVE HEALTH BEHAVIOUR BASED ON IMPLEMENTATION OF KAMPUNG KB PROGRAM IN PADANG CITY

**Desmiwarti [1], Aldina Ayunda Insani [2], Rahayu Harpiwahyuni [3]**

[1]*Departmen Obstetric and Gynecology, RSUP Dr M. Djamil, Padang, Indonesia*
[2]*Bachelor Of Midwifery Program FK-UNAND, JlnNiaga No.56 Padang City, 25127, Indonesia*
[3]*Bachelor Of Midwifery Program FK-UNAND, JlnNiaga No.56 Padang City, 25127, Indonesia*
desmiwarti@gmail.com[1]

**Abstract**

Adolescent reproductive health problems are now beginning with the lack of knowledge of adolescent about reproductive health. There are still adolescent in Padang City who have bad bahavior about reproductive health. Dealing with this matter the governmentthrough BKKBN implements Kampung KB program one if which is a PIK-Remaja Program. PIK-Remaja is a forum for adolescent to increase knowledge about reproductive health and change behavior to be better. The purpose of this study was to look at the differences of behavior of adolescent reproductive health based on implementation of Kampung KB program in Padang city. This study used Cross Sectional design, conducted in Kampung KB Parupuk Tabing village and Lubuk Minturun Village in July 2018. The subjects of the study were adolescent aged 18-21 years old, 120 people in total. Sampling technique used was simple random sampling. Data collection by observation and questionnaire. Univariate and bivariate data analysis using Chi square with p value<0,05. results showed there were differences in adolescent knowledge about reproductive health (p=0,01) based on the implementation of Kampung KB program. Meanwhile, there is no difference for attitudes (p=0,19) and actions (p=0.82) adolescent about reproductive health based on the implementation of the Kampung KB program. There are differences in knowledge of adolescent reproductive health based on the implementation of Kampung KB program, and there is no difference in attitudes and action of adolescent reproductive health based on the implementation of Kampung KB program. It is expected that the village that have not held yet can be considered to make PIK-Remaja groups because they have quite a positive impact.

**Keywords**: Adolescent, Reproductive

## INTRODUCTION

Adolescents are a transition period between childhood and adulthood, where the occurrence of spurts grows, secondary sex characteristics arise, fertility is achieved and psychological and cognitive changes occur (Soetjiningsih, 2010). According Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN) the age range of adolescents is 10 to 24 years and is not yet married (BKKBN, 2015).

Adolescence is characterized by growth and development and changes in the emergence of various opportunities which then often pose risks to adolescent reproductive health. Teenagers have a need for sexual health, where the fulfillment of sexual needs varies greatly. One factor in the problem of sexuality in adolescents occurs hormonal changes that increase sexual desire (sexuality libido) of adolescents. (Sarwono, 2011).

Changes in the intelligence and emotional intelligence of adolescents in the form of a great curiosity, dare to take risks in all things without thinking carefully makes adolescents have a trial and error attitude towards everything. Adolescent trial and error when followed by a desire for sexuality and not directed towards kindness will tend to give negative effects on adolescents such as underage marriage, unwanted pregnancy and drug addiction.

The highest age of dating in Indonesia is the age of 15 to 17 years, which is 42.7% in the group of male adolescents and 47% in female adolescents. The first group of female adolescents under 15 years of age was 33.3% and 34.5% for male adolescents. The age group is feared that they do not have adequate life skills, so they are at risk of unhealthy dating behavior. (Kemenkes RI, 2015).

The results of the Survei Penduduk Antar Sensus on the number of births to women of certain age groups per 1000 women of that age or the Age Specific Fertility Rate (ASFR) in 2015 were in the form of a U-shaped letter with a peak age of 25-29 years. However, the ASFR figure aged 15-19 years is also quite high, namely 40.1 per 1000 women (BPS, 2016) is still far from the BKKBN's strategic target in the National Medium Term Development Plan (RPJMN) and the 2015-2019 Strategic Plan (Renstra) which is a decrease in ASFR to 38 per 1000 women in the 15-19 year age group in 2019 (BKKBN, 2015). The results of the 2012 SDKI stated that 8% of women aged 25-49 years had the first sexual intercourse at the age of 15 years. This result is in line with a subsequent survey that 10% of female adolescents aged 15-19 years have become mothers with data of 7% having given birth and 3% are pregnant with their first child (SDKI, 2012).

In Mahmudah's research (2016) an overview of the attitudes of adolescents towards various sexual behavior of adolescents in the city of Padang found adolescents who behaved negatively as much as 34.8%. adolescents have sexual behavior at risk of 20.9% and among adolescents who behave sexually at risk claim to have had sexual intercourse as much as 5.1%.

The high incidence of underage marriage, the number of premarital sex events and young women aged 15-19 years have become mothers or are pregnant with the first child the government promotes a mental revolution from the family so that it can form a tough adolescent. The mental revolution of this family was mandated by President Joko Widodo to BKKBN with the Kampung KB program which also became an icon of BKKBN. Kampug KB is a step to strengthen the Population, Family Planning and Family Development (KKBPK) program in an integrated and integrated manner both in the BKKBN and across sectors in the field. Kampung KB are expected to contribute to the success of the Development Priority Agenda (Nawacita), especially number 5 (five), namely "Improving the Quality of Indonesian Human Life" (BKKN, 2016).

One of the specific objectives of Kampung KB is to increase family resilience through the Development of Toddler Families (BKB), Youth Family Development (BKR), Elderly Family Development (BKL) and the Youth Counseling Information Center (PIK-Remaja). The indicator of success of this specific goal is the participation of families who have adolescents in the BKR and the participation of adolescents in PIK-Remaja is above the average achievement of the village and the average age of the first marriage of women is over 20 years. (BKKBN, 2015).

The results of research conducted by a team from the Bogor Agricultural Institute (IPB) in the sixteen regencies and cities of the Kampung KB in West Java are quite good. 86.8% of the 400 respondents received health information and 80.9% received reproductive health information from meetings conducted in the Kampung KB program (BKKBN, 2017). The provision of information about reproductive health will certainly have a positive impact on reproductive health behavior in Kampung KB and improve the quality of human life according to the priority agenda of the fifth Nawacita.

Padang City has eleven Kampung KB. These 11 Kampung KB are located in every sub-district in Padang City. Each Kampung KB has a PIK-Remaja group in the village. One of the Kampung KB in Padang City is Parupuk Tabing Village. The results of the initial survey of researchers in the Office of DP3AP2KB (Dinas Pemberdayaan Perempuan Perlindungan Anak Pengendalian Penduduk dan Keluarga Berencana)

of Padang City stated that Kampung KB in Parupuk Tabing Village was a pilot Kampung KB in West Sumatra Province.

When conducting a survey directly to the Parupuk Tabing KB Village area and interviewed one of the Kampung KB Working Group officers, the majority of adolescents in Kampung KB Parupuk Tabing were adolecents dropping out of school but with the Kampung KB Program involving all sectors of the youth government got a package A school, package B and package C. Other activities by adolescents in Kampung KB are lifeskill activities in the form of music training and cosmetology training as well as BKKBN Program PIK-Rermaja activities. PIK-Remaja is carried out routinely 2 times a week and giving material directly by the Padang City GenRe Ambassador.

PIK-Remaja is a place for the Generasi Planning (GenRe) program activities in the context of preparing family life for adolescents that is managed from, by and for adolescents. PIK Remaja provides information and counseling services on Marriage Age Maturity (PUP), three adolescent reproductive health problems that must be avoided or the Adolescent Reproductive Health Triad (KRR Triad), eight family functions, Life skills, and Genre. The existence and role of PIK-remaja in the youth environment is very important, meaning it can help adolescents to obtain information and counseling services that are sufficient and correct about preparing family life for adolescents (BKKBN, 2015).

Rahayu's (2013) research shows that there is an increase in the knowledge and attitudes of adolescents about premarital sex in SMAN 1 Lubuk Dalam, Siak Sri Indrapura District after counseling in the Pelayanan Kesehatan Peduli Remaja (PKPR) with a value of $p < 0.0001$ $\alpha = 0.05$. Wulandari (2015) also found a significant relationship between the use of PIK-remaja with the knowledge, attitudes and behavior of adolescents about the prevention of sexually transmitted diseases (STDs) and HIV / AIDS with an OR value of 2.67, 3.67 and 3.16 respectively.

Based on Diyanti's research (2017), stated that there are differences in adolescent behavior including knowledge, attitudes and actions towards reproductive health in high schools that hold and do not hold PIK-remaja programs in Padang City. In contrast to Setiowati's (2017) study there was no significant difference between the reproductive health behavior of students who participated in PIK-remaja and students who did not attend PIK-remaja in Sewon Yogyakarta 1 High School. Subsequent research conducted by Putri (2017) showed that there were differences in knowledge and attitudes of the KRR Triad on students based on the implementation of PIK-remaja, while for the action there was no difference in the actions of students based on PIK-remaja implementation.

## II.Method

This research is research analytic with cutting design latitude. Implemented in Kampung KB Parupuk Tabing and not Kampung KB Lubuk Minturun with a sample is a adolescent who met the inclusion criteria, were taken by *simple random sampling* . Data collection is done with how to fill in the questionnaire. Data analysis univariate and bivariate with *chi-square* analysis ($p \leq 0.05$).

## III.Results

**Table 1. Frequency Distribution respondents based on age and resources**

| | Kampung KB | | Tidak Kampung KB | |
|---|---|---|---|---|
| | **f** | **%** | **f** | **%** |
| **Age** | | | | |
| 18 | 31 | 51,7 | 34 | 56,7 |
| 19 | 10 | 16,7 | 10 | 16,7 |
| 20 | 8 | 13,3 | 9 | 15 |

| | | | | |
|---|---|---|---|---|
| 21 | 11 | 18,3 | 7 | 11,7 |
| **Source Information** | | | | |
| parents, Teacher and health workers | 41 | 68,3 | 28 | 46,7 |
| print media and Internet | 19 | 31,7 | 32 | 53,3 |

From table 1 shows that majority of adolescents in Kampung KB Parupuk Tabing (51.7%) aged 18 year. Regions are not Kampung KB Lubuk Minturun also shows the majority of adolescents 18 years old (56.7%). Resources adolescent reproductive health at Parupuk Tabing KB Village (68.3%) get from parents, teachers or health workers, while adolescents not in Kampung KB 53.3% get health reproduction information of media print and internet.

**Univariate Analysis**

**Table 2. Frequency Distribution Knowledge adolescents About reproductive Health**

| | **Kampung KB** | | **Tidak Kampung KB** | |
|---|---|---|---|---|
| | **f** | **%** | **f** | **%** |
| **Knowledge** | | | | |
| Good | 52 | 86,7 | 38 | 63,3 |
| Enough | 5 | 8,3 | 15 | 25 |
| Not Good | 3 | 5 | 7 | 11,7 |

From table 2. shows majority of adolescents in Kampung KB Parupuk Tabing (86.7%) has good level of knowledge and adolescents are not in Kampung KB Lubuk Minturun (63.3%) also owns good level of knowledge.

**Table 3. Distribution of Attitude Frequency adolescents About reproductive Health**

| | **Kampung KB** | | **Tidak Kampung KB** | |
|---|---|---|---|---|
| | **F** | **%** | **F** | **%** |
| **Attitude** | | | | |
| Positive | 37 | 61,7 | 29 | 48,3 |
| Negative | 23 | 38,3 | 31 | 51,7 |

From table 3 shows most adolescents in Kampung KB Parupuk Tabing (61.7%) have a positive attitude and adolescents in not Kampung KB Lubuk Minturun (48,3%) has a positive attitude.

**Table 4. Frequency Distribution Adolescents Actions About Reproductive Health**

| | **Kampung KB** | | **Tidak Kampung KB** | |
|---|---|---|---|---|
| | **f** | **%** | **f** | **%** |
| **Action** | | | | |
| Good | 47 | 78,3 | 45 | 75 |
| Enough | 13 | 21,7 | 15 | 25 |

Based on table 4 shows a portion big adolescents in Kampung KB Parupuk Tabing (78.3%) have good actions about reproductive health and adolescents not in Kampung KB Lubuk Minturun (75%) has an good action about reproductive health.

**Analysis bivariate**

**Table5. Knowledge Differences Adolescent About Reproductive Health based on implementation Kampung KB Program**

| Pelaksanaan Program Kampung KB | Knowledge | | | | | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Good | | Enough | | Not Good | | |
| | f | % | f | % | f | % | |
| Kampung KB | 52 | 86,7 | 5 | 8,3 | 3 | 5 | 0,01 |
| Tidak Kampung KB | 38 | 63,3 | 15 | 25 | 7 | 11,7 | |
| **Total** | 90 | 75 | 20 | 16,7 | 10 | 8,3 | |

Based on table 5 above seen that the percentage of adolescents in Kampug KB with level Good knowledge (86.7%) is greater compared to adolescents not on Kampung KB village (63.3%). Based on the test statistics obtained *p-value*<0.05 ( $p$ = 0.01), meaning that there are differences knowledge adolescents based on the implementation of Kampung KB Program.

**Table 6. Differences in Adolescent AttitudesAbout Reproductive Health Based on Implementation Kampung KB Program**

| Pelaksanaan Program Kampung KB | Sikap | | | | *p-value* |
|---|---|---|---|---|---|
| | Positive | | Negative | | |
| | f | % | f | % | |
| Kampung KB | 37 | 61,7 | 23 | 38,3 | 0,19 |
| Tidak Kampung KB | 29 | 48,3 | 31 | 51,7 | |
| **Total** | 66 | 55 | 54 | 45 | |

Based on table 6 above, it can be seen that the percentage of adolescents in Kampung KB have a positive attitude (61.7%) greater than adolescent are not in Kampung KB (48.3%). Based on statistical tests obtained *p-value*> 0.05 ( $p$ = 0.19), meaning no there are differences in the attitudes of adolescent about reproductive health.

**Table 7. Differences in adoelscents Actions About Reproductive Health Based on Implementation Kampung KB Program**

| Pelaksanaan Program Kampung KB | Tindakan | | | | *p-value* |
|---|---|---|---|---|---|
| | Good | | Enough | | |
| | f | % | f | % | |
| Kampung KB | 47 | 78,3 | 13 | 21,7 | 0,82 |
| Tidak Kampung KB | 45 | 75 | 15 | 25 | |
| **Total** | 92 | 76,7 | 28 | 23,3 | |

Based on table 7 above, it can be seen that the percentage of adoelscents in Kampung KB with good actions (78.3%) greater than with teenagers not in Kampung KB (75%). Based on statistical tests obtained *p-value* = 0.82 (p> 0.05), that means there is no difference adolescent's actions about health reproduction based on implementation Kampung KB Program.

**DISCUSSION**

The results of this study indicate that most teenagers in KB villages and not KB villages are 18 years old. This age is categorized in late adolescence or formal operational stages. The three main characteristics of the formal operational stage are the ability to think abstractly, think systematically and think hypothetically and deductively (Thalib, 2010). Interaction with peers at this stage has begun to diminish and has achieved self-identity by increasing self-integrity, being able to express opinions and be able to make good decisions and compromise (Soetjiningsih, 2010). The development of sexuality in late adolescents is more to a more intimate relationship and sexual activity.

Based on information sources reproductive health in Kampung KB 68.3% was obtained from parents, teacher or health worker. Results the same as research Nurmansyah (2013) that 80.1% respondents get information reproductive health from mother. This matter can occur because the mother is considered a person who plays the most role in parenting child. Parents as sources information could direct sexualias development of adolescents healthy. The results of this study show adolescents are not in Kampung KB obtain health information reproduction of 53.3% of print and media Internet. The internet always provides all information needed by the user. But it's still there possible information from the internet which is inaccurate or misleading (Springate dan Omar, 2013).

The results of this study show 86.7% of adolescents in Kampung KB Parupuk Tabing has good level of knowledge about reproduction health. This result is in line with research by Hardinawanti (2018) where 57.1% of students at the school get health education Reproduction has a level of knowledge good. Knowledge is the result of know what happens after someone doing sensing (Notoatmodjo, 2012) Kampung KB that have PIK-Remaja program in their environment become one of the information containers and reproductive health consultation for adolescents in their neighborhood. The same is also mentioned by Salam (2016) that the provision of education and counseling to adolescents is effective in increase adolescent knowledge about sexual and health reproduction.

Based on Test statistics using *Chi-Square is* obtained *p-value* = 0.01 ($p < 0.05$), means there is difference knowledge adolescent reproductive health in the Kampung KB with adolescents is not in the Kampung KB. Olgavianita research results (2015) also obtained an average level knowledge of students of SMAN 1 Nguter which utilizing the PIK-KRR program is 90.38% and those who do not use 34.36% with p- *value* = 0.00 ($p < 0.05$) that there are differences in levels reproductive health knowledge adolescents based on PIK-KRR utilization.

Effective peer education increase teenage knowledge about reproductive health because adolescents will more comfortable discuss health problems reproduction with peers than to adults. Results Adeomi's research (2014) shows that 9 out of 10 group respondents studies have good knowledge about HIV / AIDS after it's done peer education. Whereas on the control group is just a little increase knowledge about HIV / AIDS after peer education.

Before the education intervention peer groups both have bad knowledge about HIV / AIDS is 8 out of 10 respondents do not know the meaning of AIDS correctly.

The results showed 61.7% of adolescents in Kampung KB Parupuk Tabing village has positive attitude about health reproduction. Research conducted by Putri (2017) obtained the results the same is 65.9% of adoelscents with school that doing PIK-Remaja have a positive attitude towards TRIAD KRR. Attitude is a closed response against stimulus or object from someone. Attitude is a series symptoms respond to stimuli or object that involves thoughts, feelings, worry and soul.

Teenagers are not in Kampung KB Lubuk Minturun 51.7% have a negative attitude. In accordance with the Diyanti's research (2017) 78.3% of students Nusatama Vocational School which does not hold the PIK-Adolescent program has an attitude negative. Researcher's interview results with respondents who are still in school that they also don't have school yet PIK-Remaja program. Statistic test with the *chi*-square obtained p-value = 0.19 (p> 0.05) that is not present differences in reproductive health attitudes teenagers based on implementation Kampung KB program. In line with the results Mayzufli's (2013) study did not exist differences in reproductive health attitudes teenagers between BPI 1 high school with Madrasyah Aliyah Sukamiskin Bandung with p = 0.31. SMA BPI 1 is schools that have learning
about health reproduction obtained 55% f their students have positive or supportive attitude, whereas Madrasah Aliyah in Sukamiskin not yet there is a learning program about obtained reproductive health 65% students have a negative attitude.

There is no difference in the attitude of adolescent reproductive health based on the implementation of Kampung KB program because there are other factors that influence a person's attitude. Azwar (2013) states that to get a supportive or positive attitude is not only obtained from knowledge but also influenced by emotional factors, personal experience, mass media, educational institutions and the influence of others who are considered important.

An attitude is characterized by something that is not brought from birth but results from learning, experience and can change according to the situation. The object to be addressed by attitudes can be one or more. Attitudes always contain factors of feeling and motivation and this is what distinguishes them from knowledge. In this study other factors that also influence the attitude of adolescents not in Kampung KB Lubuk Minturun are the influence of mass media. Olarinmoye's research (2014) states that internet use that is not controlled by adolescents has a negative influence on adolescent attitudes about reproductive health. After accessing reproductive health information through the internet 56.5% of adolescents will engage in sexual activity.

The results of this study show 78.3% of adolescents in Kampung KB have good action. In line with research Hardinawanti (2018) that 63.6% of students who received health education reproduction at school has actions the good one. Putri's Research (2017) 54.8% school teenagers who carry out the PIK-Remaja program has actions the good one. Statistical test results were obtained p = 0.82 (p> 0.05), that is not found differences in reproductive health measures adoelscents in the Kampung KB with adolescents not in Kampung KB. Research result Setiowati (2017) with the *chi-square* test obtained the value of p = 0.07 (p> 0.05), that means there are no behavioral differences reproductive health among students follow PIK-Remaja and students who are not participating in PIK-Remaja. Research done by Putri (2017) too obtained p- *value* = 0.367 (p <0.05) that there is no difference in action between schools that hold PIK-R with those who do not hold PIK-R.

Researcher's assumptions are not available differences in reproductive health measures because there are other factors affect action formation adolescent reproductive health. adolescents not in Kampung KB 75% have good actions can be caused by the factor of adolescent education that has been complete high school formal education or is studying High school. There is a teacher's role as a person second old in facilitating, nurturing and control the actions of teenagers during in school (Nia, 2016). In school there are also regulations regarding the actions of adoelscents who must obeyed by the adolescent. If adolescents violate existing regulations school will get sanctions or expelled from school. Different with adolescents in Kampung KB most of them are educated non-formal, so the role of the teacher is very less felt. Daily life adolescents days in kampung KB are also filled with activities such as fishermen or work as a parking attendant.

## CONCLUSION

There are differences in the level of knowledge of adolescents about reproductive health based on the implementation of Kampung KB program. There are no differences in attitudes and actions of adolescent about reproductive health based on the implementation of the Kampung KB program .


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# RELATIONSHIP BETWEEN PARENT FOSTER PATTERN WITH INCIDENT SIBLING RIVALRY IN CHILDREN AGE 3-5 IN PLAY GROUP SAYANG IBU CAPITAL CITY OF PADANG

**Lusiana El Sinta Bustami[1] , Julizar [2], Rahmi Nabila[3]**

*[1-3]Bachelor of Midwifery Program, FK UNAND, Jl. Niaga No. 56 Padang City, Indonesia*
*[2]Departemen of Medical Physics Jl. Perintis Kemerdekaan No. 94 Padang City, Indonesia*
lusianaelsintabustami@med.unand.ac.id[1]

**Abstract**

Sibling rivalry is an aggressive interaction that often poses a quarrel between siblings. This reaction occurs because of envy or jealousy towards the presence of a sibling and scramble for parents ' affection. In Indonesia about 75% of children had sibling rivalry. Various factors affecting sibling rivalry include the child's age factor, gender, age distance with siblings, number of siblings and parenting patterns. The purpose of this research is to know the relationship between of parenting patterns that are one of the factors that influence the incident of sibling rivalry in children aged 3-5 years in play group Sayang Ibu capital of Padang.

The research using cross sectional design was carried out in play group Sayang Ibu capital City Padang in June 2019. The samples of this research were all parents (mothers) of children attending the play group Sayang Ibu Padang City. In this study used univariate analysis and bivariate analysis with chi-square test.

The results of this research showed that 62.5% from 40 samples experienced had a sibling rivalry. The result of bivariate analysis indicates that there is a relationship between the parents ' foster patterns and the sibling rivalry (P = 0.024).

There is a meaningful relationship between the parents ' foster pattern with the emergence of sibling rivalry in children aged 3-5 years in the play group Sayang Ibu Padang city. The authoritarian and permissive foster-pattern is the dominant foster pattern of forming sibling rivalry behavior in children, and a democratiary foster pattern is the foster pattern of the least provoking sibling rivalry

**Keywords** : Parenting, sibling rivalry.

## INTRODUCTION

Competition between siblings (sibling rivalry) is jealousy and hate that are usually experienced by a child against birth / presence of siblings (Djamarah, 2014). Sibling rivalry usually happen when the age difference between siblings too close, the distance of age commonly trigger sibling rivalry is the distance between the ages of 1-3 years, and appeared at the age of 3-5 years and then reappeared at the age of 8-12 years (Setiawati & Zulkaida 2007 ).

*sibling rivalry* is a popular term for the interactions are often aggressive and cause fights between siblings. Reaction Sibling rivalry can be done by hitting, biting, kicking, pushing, pinching, insinuating / mock, ridicule, and neglect (Hurlock, 2007).

In the report of Lamb and Sutton-Smith In America 55% of children reported experiencing competition within the family and between 10- 15 years of age is the highest category (McNerney and Usner, 2001). In Indonesia, almost 75% of children experienced sibling rivalry, reactions that often appear are children more aggressive, hitting or hurting brother or sister, defying the mother, fussy, setbacks, often angry outbursts, often crying for no reason, become more spoiled or sticky in the mother (Priatna and Yulia, 2006).

When there sibling rivalry in a brotherly relationship and can not be overcome by the parents usually will reap a good impact on the self, siblings and other people. When the pattern of relationships

between children and siblings are not good then the common pattern of a bad relationship will be brought the child to the social relationship outside the home. Habits fight child casually brought out of the house will make the child was not accepted by the environment outside the home (Hurlock, 2007).

Factors that could affect the sibling rivalry of the factors of the parents themselves and the child itself. These factors form the attitudes of parents, individual character, the order of position, gender, age differences, number of siblings, the kind of discipline, and the influence of outsiders. The behavior of parents everyday is a way to educate children to avoid sibling rivalry nicest, differences in behavior of parents are given to children to make jealousy feel less attention, resulting in the incidence of sibling rivalry. There is a significant effect of the factor type of parenting parents with the incidence of sibling rivalry (Listiani, 2010).

Mother became an important figure in educating and caring for children, because mothers more often interact with their children and more attention to how the development of each child. An understanding of the development of the child's mother will determine the quality of child development itself. Children in the growth phase in desperate need of extra attention from the mother. One of the problems of children who are very disturbing himself, namely the presence of a new family member (brother) or interference from his brother who also demand the attention of the mother because of busy mothers in the care of the chores so that attention is reduced, it causes the child seeking attention from the mother by competing and being cause of quarrel between brothers. Kids who are not receiving attention, discipline,

There are three types of parenting parents to their children, namely parenting demokratif, characterized by an attitude of openness between parents and their children. Then there is the type of authoritarian parenting, characterized by parenting the rules are strict, and another no type of permissive parenting, characterized by how parents educate children who tend to be free, the child is given leeway as possible to do what He wants (Hurlock, 2007).

Of these three types of parenting, parenting is parenting demokratif tends to be most effective. Because parents who use this demokratif parenting applying the right balance between control and autonomy, giving children the chance to establish independence, while providing a standard, limits, and guide your child needs (Santrock, 2007).

Parents are the key that may affect sibling rivalry, but parents also can minimize sibling rivalry (Setiawati and Zulkaida, 2007). This can be prevented by parents who use child care are demokratif , fairly and without comparing between brother and sister, parents put themselves between them and remain directed towards good and fair that can reduce the incidence of sibling rivalry (Dinengsih and Agustina , 2018). Of parents who use authoritarian parenting an impact on motor development of a child is a child tend to be aggressive which makes easy to be harsh and angry with his brother (Kartono, 2006). Permissive parents give freedom to the child to do and weak exercise the discipline to children so parents less attention and less concerned about what happened between her sibling rivalry that led to the incident (Noviani, 2007). Based on the survey results show a pattern of parenting by category demokratif as many (44%) of parents, authoritarian parenting as many (34%) of parents, permissive parenting as many (14%), (Setiawati and Zulkaida, 2007).

Researchers obtained from a survey of Padang city Education Department data obtained the highest number of students of early childhood education throughout the desert city located in one of the early childhood education in the district Pauh, as much as 5 early childhood education in the District Padang Pauh. Early childhood highest number of students are aged 3-5 years in early childhood KB Sayang Ibu Koto Luar, District Padang Pauh which amounted to 57 learners in the school year 2018/2019 (Paadang City Department of Education, 2019).

The results of a preliminary survey interviews with eleven mothers waiting for their children in the playgroup KB Sayang Ibu, obtained information from six mother said that her son is nothing like pinching, hitting, often quarrel among children, quarrels usually caused by fighting over a toy or food so cause a reaction in tears at one of the brothers. The mother said her son was also often get angry and cry if only to bring one of his brothers to go out, and also obtained information about one of his brothers who

like to complain for the actions of his brothers. One parent also said the frequent quarrels between the boy and his brother.

Besides, it also get information on how mothers care for their children, among others, there is to be fair in a way to bring all their children out if you want to travel in order to avoid jealousy among his or her child, there are also women who say blame his older sister when her sister crying and mothers only bring one of his children if berpegian out. The mother of eleven, there are five women who apply demokratif parenting, five mothers apply authoritarian parenting and the mother using permissive parenting. The diversity of the mother's parenting way related to the child's behavior, including behavior of sibling rivalry.

Is there a connection with the parents' parenting behaviors in early childhood sibling rivalry KB Sayang Ibu Kota Padang needs to be investigated?

## II. METHOD

This type of research is ***cross sectional.*** Data collection was conducted in January 2018 through July 2019. The population in this study is the whole mothers who have children attending in playgroup KB Sayang Ibu Padang City ages 3 to 5 years. The number of samples of this research were 40 subjects. Sampling was done by total sampling technique. Data processing is performed by the chi-square test ($p < 0.05$) using SPSS 20 software.

## III. RESULTS

### Univariate analysis

**Table 1. Characteristics of Respondents**

| **characteristics** | **f (n = 40)** | **%** |
|---|---|---|
| Age of parents (mother) | | |
| 20-30 years | 5 | 12.5% |
| 31-40 years | 28 | 70% |
| 41-50 years | 7 | 17.5% |
| Older parents' marriage | | |
| 1-10 years | 19 | 47.5% |
| 11-20 years | 21 | 52.5% |
| Religion | | |
| Islam | 40 | 100% |
| Christian / Catholic | 0 | 0% |
| Education dad | | |
| Basic | 4 | 10% |
| secondary | 30 | 75% |
| High | 6 | 15% |

| | | |
|---|---|---|
| maternal education | | |
| Basic | 1 | 2.5% |
| secondary | 27 | 67.5% |
| High | 12 | 30% |
| | | |
| Father's occupation | | |
| PNS | 3 | 7.5% |
| entrepreneur | 19 | 47.5% |
| labor | 11 | 27.5% |
| Driver | 4 | 10% |
| farmer | 3 | 7.5% |
| Does not work | 0 | 0% |
| | | |
| mother Works | | |
| PNS | 6 | 15% |
| IRT | 34 | 85% |
| | | |
| Number of children | | |
| 2-3 people | 37 | 92.5% |
| > 3 people | 3 | 7.5% |
| | | |
| Age children as respondents | 3 | 7.5% |
| 3 years | 9 | 22.5% |
| 4 years | 28 | 70% |
| 5 years | | |
| | | |
| The sex of children as respondents | | |
| Man | 22 | 55% |
| woman | 18 | 45% |
| | | |
| Gender kin | | |
| Man | 21 | 52.5% |
| woman | 19 | 47.5% |
| | | |
| Getting old children in early childhood education | | |
| <2 years | 26 | 70% |
| > 2 years | 12 | 30% |
| | | |
| Distance aged children | | |

| | | |
|---|---|---|
| with kin | | |
| 1-3 years | 24 | 60% |
| > 3 years | 16 | 40% |

Based on Table 1 shows the majority of maternal age was 30-40 years (70%) with a long marriage mostly over 10 years old (52.5) and Moslem (100%). Most respondents secondary education (67.5%) and most data is working as a housewife (85%) with the majority of the number of children is two people (92.5%) at the age of 5 years (70%), the majority of respondents have a child-sex male (55%) with an age range with his brother majority is less than 3 years (60%).

**Table 2. Frequency Distribution Parenting Parents**

| **Parenting** | **f** | **%** |
|---|---|---|
| Demokratif | 16 | 40% |
| Authoritarian | 16 | 40% |
| Permissive | 8 | 20% |
| **Total** | 40 | 100% |

Table 2 shows the mothers of children in the playgroup KB Sayang Ibu Padang city, some mothers apply demokratif parenting ie 40% and 40% of authoritarian upbringing and at least apply the permissive parenting by 20%.

**Table 3. Frequency Distribution of Genesis Sibling Rivalry**

| **Genesis sibling rivalry** | **f** | **%** |
|---|---|---|
| Not Happen sibling rivalry | 15 | 37.5% |
| Occur sibling rivalry | 25 | 62.5% |
| **Total** | 40 | 100% |

Table 3 shows the incidence of sibling rivalry in the playgroup KB Sayang Ibu Padang city is 62.5% and that did not experience the incidence of 37.5% which showed the majority of children experiencing occurrences sibling rivalry.

**Bivariate analysis**

**Table 4. Relationships Parenting Parents With Genesis emergence Sibling Rivalry In Children Ages 3-5 Years On ECD KB Loving Mother**

| **Parenting parents** | **sibling rivalry** | | | | **Total** | | ***p-value*** |
|---|---|---|---|---|---|---|---|
| | **Not Happen siblibng Rivalry** | | **Occur sibling rivalry** | | | | |
| | **f** | **%** | **f** | **%** | **f** | **%** | |
| Demokratif | 10 | 62.5% | 6 | 37.5% | 16 | 100% | |

| | | | |
|---|---|---|---|
| Authoritarian | 4 25% 12 75% | 16 100% | 0,024 |
| permissive | 1 12.5% 7 87.5% | 8100% | |
| Total | 15 37.5% 25 62.5% | 40 100% | |

Table 4 shows the parents of learners in the playgroup KB Sayang Ibu Padang city largely apply demokratif and authoritarian parenting and the rest using permissive parenting. Of parents who apply demokratif parenting at events get as much as 37.5% of children experienced sibling rivalry, parents who use the results obtained authoritarian parenting children experience sibling rivalry incidence of 75% of children and parents who use permissive parenting experience events sibling rivalry as much as 87.5% of people. From the chi-square test p = 0.024 diamana obtained ($p \leq 0.05$). It can be concluded that there is a significant relationship between parenting parents to the events in early childhood sibling rivalry KB Sayang IbuPadang City.

## IV. DISCUSSION

In this study, based on tables characteristics of respondents most respondents were in the age of 31-40 years (70%) which at this age is said to be ripe age for parents to provide care or education for children so that parents are expected to provide good parenting , because if the age is too young or too old it can affect parenting. Most of the mothers education medium (30%) and work as a housewife (85%), education also affects the way the care of these parents, parents who are well educated will provide good parenting for her child, and the work will affect the economy of a family.

In children based on age distribution mostly in the age of 5 years by 70%. Aged 3-5 years where the first age of sibling rivalry appears and reappears at the age of 8-12 years, which at that age children in times of growth and development with special needs, whether physical, psychological, social and spiritual (Hidayat, 2013) , At this age children usually express their emotions freely and openly, often in angry attitude show by the children at that age. Jealousy in children aged 3-5 years are common, especially the fight over the attention of parents so that they can lead as a reaction to sibling rivalry. Based on the distribution of sex, who are mostly male that is equal to 55%, and gender distribution of kin of the child respondents mostly have a brother that is equal to 52.5%. The gender difference affects the occurrences sibling rivalry that will affect the child's social adjustment. Girls are more like role in caring for and helping their siblings than boys, with boys showing emotional and behavioral problems (Ambriani, 2006). Based on the distance distribution with your age most are within 1-3 years by 60%. Sibling rivalry also occurs when the distance is too close ie at a distance of 2-4 years for the children alike get the same attention. If they are adjacent age usually do uncooperative, unfriendly and compete for affection.

On the results of research conducted by the authors of the 40 respondents showed parents who apply demokratif parenting (40%), 16 authoritarian parenting (40%) and permissive parenting (20%). Parenting is a way or method of care used by parents to educate their children become socially mature person. It happened because consciously or unconsciously, parents' behavior more imitated by children either directly or indirectly (Sandtrock, 2007)

Research conducted in the playgroup KB Sayang Ibu Padang City showed that the majority of parents applying demokratif and authoritarian parenting to children. In this case the results obtained are balanced in its application, respectively by 40%, which is where most parents apply demokratif parenting

that parents pay attention and respect the freedom and opinions of children (Santrock, 2007). As for parents who apply authoritarian parenting in which parents tend to make the rigid rules and strict in its application, as well as demand and expect compliance from the child so that the child must comply with the rules set out in the eyes of their parents without any discussion or input from children (Santrock, 2007).

In this study the parents mostly do not work / housewife (85%) so that parents are more likely to interact and pay attention to their children's growth, but in getting many parents who apply authoritarian parenting this case could be influenced by economic family, education mother, parenting experience is in getting the mother in the past so that influence how parents provide care to their children.

In this study, a large of mothers over the age of 30 years (70%) of a certain age range both to perform the role of parenting, when too young or old may not be able to play such a role in an optimal because it requires physical strength and psychosocial. several ways you can do to be ready to assume the role of parenting among which are education, well-educated parents are encouraged to use the most good parenting and appropriate for children in conjunction with sibling rivalry.

In the results of Table 5.3, 62.5% of children inthe playgroup KB Sayang Ibu Padang cityexperienced anything sibling rivalry

**Relationship Between Parent Foster Pattern With Incident Sibling Rivalry In Children Age 3-5 In Play Group Sayang Ibu Capital City Of Padang**

In this study, a significant association between parenting with sibling rivalry incidence in children aged 3-5 years, using chi-square analysis obtained degrees p-value of 0.024. This is in line with the research conducted by Nur Yearina Yesi where parenting has a significant relationship with the occurrence of sibling rivalry in children. In his research, says parenting is good for children is appropriate parenting for the child and not overly spoil the child, parents should understand how to care for their children so they can educate their children well, if parents pamper their children also did well in the development of the child because it will result in children are very dependent on their parents and less independent in their activities.

According to the study (Nurmaningtyas, 2013) patterns of parenting tend to compare the child is a major factor in sibling rivalry. Comparison of children who do parents usually happens when a child enters childhood early and mid, children participate in the activities of a larger, therefore the parents tend to compare attitudes, abilities and achievements of one child with other children, it will lead to sibling rivalry.

These results indicate a pattern of authoritarian parenting more raises the incidence of sibling rivalry in children. Based on Table 5.4 it can be seen that the authoritarian and permissive parenting tend to form sibling rivalry. It can be assumed that sibling rivalry can be caused by upbringing authoritarian parents. Authoritarian parenting style ie restrict and punish the child when parents force children to follow all the wishes of parents. But the results of this study also get the parents to use parenting demokratif still occur sibling rivalry on his son, this is due to sibling rivalry is not only influenced by upbringing, but is also influenced by the age of the child,

Research conducted Petranto (2009), authoritarian and permissive parenting poor contribute to the formation of self-esteem and lead to highly dependent child to the mother. In contrast to children who grew up with democratic upbringing, the child is given the freedom to explore the potential, achievement, positive behavior, successful socialization, children are more responsible, and have a high confidence. Another study conducted by aisyah (2010) states permissive parenting tend to give freedom to children

without providing control at all. If a child is getting left / ignored without getting noticed affection the children will seek attention by displaying negative actions including interrupt / bully brother who raises the incidence of sibling rivalry. But this can be prevented by giving parents that parenting in a fair democratic manner without comparing between brother and sister, parents put themselves between them and still directs it towards a good and fair

Demokratif discipline can overcome some of the carnage of the permissive discipline, but the impact is not as big as the impact of authoritarian discipline, but overall discipline demokratif create relationships between relatives more pleasant and healthier than authoritarian discipline. With the democratic system, children learn why they should be give and take on the basis of cooperation. In authoritarian systems they are forced to do so and this has fueled resentment (Hurlock, 2007).

## V.Conclusion

1. Most mothers as respondents in the playgroup KB Sayang Ibu Padang Cityeducated 31-40 years old, with long marriage of more than 10 years, most of the secondary education and work as a housewife with a number of children mostly less than 3 people aged 5 year with most of the male gender and age range with relatives mostly less than 3 years.
2. Most respondents parent (mother) of respondents in the playgroup KB Sayang Ibu Padang CityMother applying demokratif and authoritarian parenting, and a limited number permsif implement parenting.
3. Most respondents children in respondents in the playgroup KB Sayang Ibu Padang City Padang experienced anything sibling rivalry.
4. There is a relationship between parenting parents with sibling rivalry occurrences in children aged 3-5 years in respondents in the playgroup KB Sayang Ibu Padang City, concluded the authoritarian parenting sibling rivalry tend to shape behavior in children and parenting can minimize occurrences demokratif sibling rivalry. Increasingly authoritarian and permissive parenting parents bring greater incidence of sibling rivalry and increasingly demokratif parenting parents increasingly reduce the incidence of sibling rivalry.

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# THE DIFFERENCES OF TRIAD BEHAVIOR OF ADOLESCENT REPRODUCTIVE HEALTH (ARH) ON STUDENT BASED ON IMPLEMENTATION OF ACIC AT SMK IN PADANG CITY

**Firdawati[1], Ulvi Mariati[2], Rahmiza Eka Putri[3]**

*[1]Departement of Public Health Sains Faculty of Medicine Universitas Andalas, Jln. Perintis Kemerdekaan no.94, Jati, Kota Padang, Indonesia*

*[2] Health Polytecnic Mercu Jaya Padang, Padang, Indonesia*

*[3]Bachelor of Midwifery Program Faculty of Medicine Universitas Andalas Jln. Niaga no. 56 Padang,Indonesia*

firdawati@med.unand.ac.id[1]

**Abstract**

The problem of juvenile delinquency in Indonesia has reached levels that disturbs society. These problemabout TRIAD KRR which is three risks faced by adolescents (sexuality, HIV/AIDS and drugs) which will be badly as a successor to the nation's younger generation.To responsthe problem of the adolescentsit is BKKBN make a program which is Adolscents Counseling Information Center (ACIC) as a media for adolescents which aim to give information service and counseling about TRIAD KRR. The purpose of this study was to see the difference of TRIAD behavior of adolescents reproduction health (ARH) on student based on implementationof PIK R at SMK in Padang City.This study used analytical survey method with Cross Sectional Design. Sample in this study was student in XI and XII grade SMKN 9 and SMKN 2 Padang , 270 people in total. Sampling technique used was proporsional stratified random sampling. Data was analyzed univariately to get averagescore of each variable and bivariately using Independent T-test..Result of this study showed that there are knowledge difference (p= 0,000) and attitude (p= 0,001) on student based on PIK R implementation. While to action there was no difference (p= 0,367) on student based on PIK R implementation. On the school which implementing PIK R program need it may increasing quality of information about TRIAD KRR so PIK R really give benefit to teenager. Then for the school which haven't implementing PIK R program need to consider PIK R program to be included in one of extracurriculare activity so then teenager can get the right information about TRIAD KRR.

**Keywords** : PIK R, adolescent, behaviour

## INTRODUCTION

Adolescence is a period of transition from children to adulthood marked by physical, emotional and psychological changes, as a period of maturation of the human reproductive organs. Adolescent life is a very decisive life for their future future life, because adolescents become hope for progress in a country that is as an agent of change (Widyastuti et al, 2009).

Adolescents are the largest population of the entire population of the world. According to the World Health Organization (WHO) about 1/5 of the world's population are teenagers aged 10-19 years and about 900 million are in developing countries. In Indonesia, according to the Central Bureau of Statistics, the age group of 10-19 years is 22% of the total population of Indonesia which consists of 50.9% male teenagers and 49.1% female teenagers (Soetjiningsih, 2010).

Indonesia is the 37th country with a high percentage of young marriages and is the second highest in ASEAN after Cambodia. Youth marriage negatively affects the health of adolescents and their infants and also risks premature birth, low birth weight (BBLR), and bleeding that can increase maternal and infant mortality due to insufficient preparedness from health, emotional, educational, socioeconomic, and reproduction (Ministry of Health RI, 2015).

Adolescents are the primary target in the prevention of sexually transmitted infections (STIs) especially HIV / AIDS (UNAIDS, 2012). According to the Central Bureau of Statistics 2016 the number

of HIV / AIDS cases in Indonesia continues to increase from year to year it is explained that the number of new cases of AIDS increased from 2013, 150 cases to 240 cases in 2014 (Ministry of Health RI, 2014).

To respond adolescents problem that already quite disturbing, National Family Planning Coordinating Board develop a programAdolescent and Reproduction Health (ARH) as well as forming a basis for activities with the management principle from, by and for teens called Information and Counseling Center Adolescent Reproductive Health (PIK KRR) in 2006. After development of post-birth era Law no. 52 in 2009 about Population and Family Development, the PIK KRR has been renamed the Teenage Counseling Information Center (PIK R). PIK R with the program for the preparation of life for adolescents (PKBR) is now expected to facilitate the realization of "Tough Youth" ie adolescents who behave healthy and avoid TRIAD KRR are three risks faced by adolescents (Sexuality, HIV / AIDS and drugs) including teenagers who want postpone the age of marriage till mature enough, to realize a small prosperous happy family so that later could be stocked if already married (BKKBN, 2012).

The survey results of the National Medium Term Development Plan (RPJMN) in 2010 showed that adolescents exposed to PIK R information only reached 28%.This means that only 28 out of 100 teenagers are accessed with activities related to reproductive health information (BKKBN, 2011).

The adolescent reproductive health program aims to help adolescents understand and be concerned about reproductive health so that young people have knowledge, attitudes, and healthy behaviors and are responsible for reproductive life issues (Widyastuti et al, 2009). According to Utami's (2015) study, the presence of peer counselors, information media, and information delivery methods in PIK-R can improve adolescent knowledge about TRIAD KRR.

Based on research conducted by Rezeki (2014), about the difference of knowledge and attitude of students about TRIAD KRR in SMA Negeri Kisaran Subdistrict, that there is significantly difference of knowledge from each school ($p < 0,05$ ), while test result to attitude show that the attitude of students from each school showed the same attitude ($p = 0,742$). In contrast to the research by Princess (2016), about the difference of adolescent knowledge about TRIAD KRR at school with PIK R and without PIK R in Denpasar City, showed that there was no difference of youth knowledge about TRIAD KRR at school with PIK R and without PIK R $p = 0.758$).

The cumulative number of HIV cases in West Sumatera Province in 2014 is already reached 1136 HIV cases and 952 AIDS (Ministry of Health RI, 2014). The largest number of reported cases of HIV / AIDS reported if grouped per urban district is still from Padang City with 225 HIV and 95 AIDS cases dominated by men, and not because of the use of hypodermic syringes, but this occurs because of same-sex sex, ( Provincial Health Office of West Sumatera Province, 201 5 ). Also, for the drug case from the National Narcotics Agency (BNN) and the UI Health Center, 69% of students in West Sumatera have misused drugs in 2016, 22% of whom are permanent users (National Narcotics Agency of West Sumatera Province, 2017).

Based on the preliminary survey conducted at civil service police unit (Satpol PP), it shows that almost every month in May-October 2016, many students were caught by immoral raids by Satpol PP. One of his cases is a pair of adolescents SMK caught two by two in a dark and lonely at night.

This study aims to determine the difference of TRIAD behavior of adolescent reproductive health (KRR) on students based on the implementation of PIK R in SMK Padang City.

## XII. METHODS

This study was an analitycal research based cross sectional study. 270 respondents that were students of class XI and XII in SMK N 9 Padang and SMK N 2 Padang in November 2016-November 2017. The data was collected by questionnaire. Respondents identity, knowledge about TRIAD KRR, Attitudes about TRIAD KRR, action about TRIAD KRR, and sources of information on TRIAD KRR . All data were processed using SPSS with independent T-test .

## III. RESULT

**Table 1. Frequency of Respondents Characteristics By Age And Sex**

| Characteristics | PIK R | | No PIK R | | Amount | |
|---|---|---|---|---|---|---|
| | f | % | f | % | f | % |
| **Age** | | | | | | |
| Late Adolescent | 89 | 65,9 | 94 | 69,6 | 183 | 67,8 |
| Middle Adolescet | 46 | 34,1 | 41 | 30,4 | 87 | 32,2 |
| **Sex** | | | | | | |
| Girl | 62 | 45,9 | 80 | 59,3 | 142 | 52,6 |
| Boy | 73 | 54,1 | 55 | 40,7 | 128 | 47,4 |

The table 1 showed that, from 270 respondents, more than half 183 (67,8%) were category late adolescent. According to sex, who held PIK R male respondents seen more 73 (54,1%), school who did not hold PIK R most respondents 80 (59,3%) were women

**Table 2. Frequency Distribution of Respondents Resource Information About TRIAD KRR**

| Resource Information | PIK R | | No PIK R | | Amount | |
|---|---|---|---|---|---|---|
| | f | % | f | % | F | % |
| Parents | 23 | 17,0 | 8 | 5,9 | 31 | 11,5 |
| Teacher | 9 | 6,7 | 11 | 8,1 | 20 | 7,4 |
| Media | 71 | 52,6 | 43 | 31,9 | 114 | 42,2 |
| Freiend | 19 | 14,1 | 49 | 36,3 | 68 | 25,2 |
| Etc | 13 | 9,6 | 24 | 17,8 | 37 | 13,7 |

Based on table 2 showed that school who held PIK Rmost resource information were friends 49 (36,3).

**Univariate Analysis**

**Table 3. FrequencyDistribution of Behavior (Knowledge, Attitude, and Action) TRIAD KRR On Student Based on the Implementation of PIK R**

| Characteristic | PIK R | | No PIK R | | Amount | |
|---|---|---|---|---|---|---|
| | f | % | f | % | f | % |
| **Knowledge** | | | | | | |
| Good | 83 | 61,5 | 50 | 37,0 | 133 | 9,3 |
| Poor | 52 | 38,5 | 85 | 63,0 | 137 | 50,7 |
| **Attitude** | | | | | | |
| Positive | 89 | 65,9 | 64 | 47,4 | 153 | 56,7 |
| Negative | 46 | 34,1 | 71 | 52,6 | 117 | 43,3 |
| **Action** | | | | | | |
| Good | 74 | 54,8 | 69 | 51,1 | 143 | 53,0 |
| Less | 61 | 45,2 | 66 | 48,9 | 127 | 47,0 |

Based on table 3. it can be seen that schools who held PIK R 83 (61.5%) have a good level of knowledge, 89 (65.9%) have a positive attitude, 74 (54.8%) respondents have a good action, and at schools did not hold PIK R 85 (63.0%) had levels less of knowledge, 71 (52.6%) have a negative attitude, 69 (51.1%) have a good action.

**Bivariate Analysis**

The result of statistical analysis by using independent T-test to see the difference of TRIAD KRR behavior in school students who hold PIK R with those who do not hold PIK R can be seen in table 4

**Table 4 . Behavior Difference Triad Teenager Reproduction Health (TRH) On Student Based On Pik R Implementation Conclusion**

| Variabel | Group | Mean | P value |
|---|---|---|---|
| **Knowledge** | PIK R | 20,01 | 0,000 |
| | No PIK R | 18,44 | |
| **Attitude** | PIK R | 65,38 | 0,001 |
| | No PIK R | 61,99 | |
| **Action** | PIK R | 7,64 | 0,367 |
| | No PIK R | 7,51 | |

Based on Table 4showed that the test results obtained statistical p value = 0.000 (p <0, 05) for knowledge, for attitude p value = 0.001 (p <0.05), and for action p value = 0.367 (p> 0 , 05), it can be concluded that there is a difference of knowledge and attitude between schools who held PIK R and those who did not hold PIK R, and there is no difference of action between schools who held PIK R and those who did not hold PIK R.

## IV. DISCUSSION

**Characteristics of Respondents**

The results of this study indicate that the majority of respondents are advanced adolescents (17-19 years) that is as many as 183 (67.8%), while middle adolescents (14-16 years) amounted to 87 (32.2%), but who dominate in this study is a 17-year-old teenager, this is different from research Rezeki (2013) that the respondent who dominated was 16 years old.

In adolescents who reach the age of 18 years will see the difference in the way of thinking with concrete thinking shown children, especially on the ability of deductive-hypothesis, when faced with a problem then he will think first theoretically, analyze the problem to be solved with the hypotheses he has thought (Soetjiningsih, 2010). Teens have begun to develop the capacity to think abstractly, using the principles of logic that makes teens more confident in its ability to make their own decisions, including in addressing the existing problems in teens today is TRIAD KRR (relating to sexuality, HIV / AIDS and drug use) .

According to sex, the existing school PIK R male sex seen more 73 (54 , 1%) than female respondents 62 (45.9%), whereas in schools with no PIK R respondents with female gender seen more 80 (59.3%) than male respondents 55 (40.7%). Overall, however, the female sex of 142 (52 , 6 %) was more dominant as respondents in this study

**Resource Information**

The results of this study indicates that in the existing schools PIK R most respondent information sources are media 71 (52 , 6 %), whereas in schools with no PIK R most respondent information sources are 49 friends (36.3%). The researcher assumption that the respondents in the school who held PIK R did not use this PIK R program as a source of information about TRIAD KRR where should the respondents get the source of information from their peers who joined in the management of PIK R. This happens because students do not often interact with the board PIK R because of the different schedule of school lessons that are a lot of practicum.

Information obtained by a person will be able to influence how the person's attitude toward a thing. The information obtained depends on how hecommunicates.
Communication is the process by which participants create and share information with each other in order to achieve a common understanding (Priyoto, 2014). According to Soetjiningsih (2010), information media is very instrumental in the delivery of information to the public, which is one of the factors that affect the knowledge, attitudes and behavior of a person including the behavior of TRIAD KRR.

**Univariate Analysis**

**Knowledge**

These results indicate that from 25 questions on school conducting PIK R respondents still know a little about how HIV is transmitted, visible only 42 (31.1%) who give correct answers about HIV can not be transmitted through sharing dringking glasses / and there were only 69 people (51.1%) who gave the correct answer regarding the drug causing dependence and 70 people (51.9%) who did not hold the PIK R, which gives correct answers about HIV can not be transmitted through sharing dringking glass. It can be concluded that the school held PIK R 83 (61.5%) had good level of knowledge, 52 (38.5%) had poor level of knowledge, discovered that the average knowledge of the respondents is 20.01,and in schools that did not hold PIK R 85 (63.0%) had poor level of knowledge, 50 (37.0%) have a good level of knowledge, average knowledge of the respondents was 18.44.

Knowledge is the result of knowing someone after sensing a particular object . Every human being has a different level of knowledge the higher the level of one's knowledge the higher the individual's ability to judge a material or object, which is the judgment that becomes the basis for the formation of one's actions (Notoatmodjo, 2010). A person's knowledge can be obtained through education. The higher a person's knowledge the better the understanding. Measurement of knowledge can be done by interviews or questionnaires that ask about the content of the iongin matter in the measure (Yulizawati, 2012).

**Attitude**

The results of this study indicate that in schools holding PIK R for favorable statements 22.2% of respondents strongly disagree about the statement of drug can relieve stress and depression users, and on the statement unfavourable 10.4% of respondents strongly agree about sexual education a thing that taboo for teenagers, 22.2% of respondents doubt about HIV will not be transmitted through same sex . In schools that do not hold PIK R for favorable statements 15.6% of respondents strongly disagree about the statement of drug can relieve stress and depression users, and in the unfavorable statement 8.1% of respondents strongly agree about teenagers do not need to get education hazards drug abuse, 25.9% of respondents doubt that drug users will not commit a crime to get what they want.

It can be concluded that in schools that hold PIK R 89 (65,9%) have positive attitude, 46 (34,1%) have negative attitude, it is known that respondent attitude is 65,38 , and at school which do not hold PIK R 64 (47.4%) had a positive attitude and 71 (52.6%) had negative attitudes, the average attitude of the respondents was 61.99 .

**Action**

The results of this study indicate that in schools holding PIK R 40% of respondents avoided friends with drug users and 39.3% of respondents answered wrong on the statement is not dating to prevent unwanted pregnancies . In schools not holding PIK R 48.9% of respondents avoided making friends with drug users.It can be concluded that the school held PIK R 74 (54.8%) of respondents have a good action, and 61 (45.2%) had a poor action, known to the average action of respondents was 7.64, and and at school did not hold PIK R 69 (51.1%) had good actions, and 66 (48.9%) had unfavorable actions, the average of the respondents was 7.51

**Bivariate Analysis**

**TRIAD KRR Differences Knowledge On Students Based on the Implementation of PIK R**

Based on the results of independent T-test obtained p value = 0,000 (p <0.05), it can be concluded that there is a significant difference of knowledge between schools that hold PIK R with that do not hold PIK R. The results of this study in line with research Rezeki (2013) in Kecamatan Kisaran shows that there is a difference of knowledge in each school about TRIAD KRR. In contrast to the Putri (2016) study in Denpassar showing that there is no difference in adolescent knowledge about TRIAD KRR in schools with PIK R and without PIK R with *p value* = 0.758.

The difference in the level of knowledge in this study is assumed because the information about TRIAD KRR given to the teenager is still very less and not yet fully understandable, it is because teenagers in schools that do not hold PIK R more get information from peers who may not have knowledge enough about TRIAD KRR, then because of the lack of services for adolescents in providing information about TRIAD KRR in schools as it is known. High curiosity in adolescents can get them into the wrong information if they do not get the real knowledge.

The level of knowledge of the respondents in the schools that hold PIK R is influenced by the source of information obtained, peers or peer counselors who have attended PIK R training is a good source of information for adolescents. But in fact the field of more than half of teenagers get information from the media, this is because in this sophisticated era is very easy to get the information we want, can not be denied almost all teenagers at this time make the *phone* as a necessity with connection features the internet is very easy to access, which will meet the curiosity of the teenager. PIK R facility as a forum for adolescents to obtain information and reproductive health services provided in schools has not been fully utilized by adolescents . Researchers assume a new update and breakthrough is needed related media in providing information about TRIAD KRR through android operating system application. The results of Noviyanto et al (2012) showed that 55% of users of *Sex Education For Health (SEFH) application* feel the ease of use of this application, 75% of users indicate that this application is important to get information about sex education in adolescent sex. Education on reproductive health is also needed for a person to support a positive attitude (Yulizawati dkk, 2016)

**TRIAD KRR Differences Attitudes On Students Based on the Implementation of PIK R**

Based on the results of statistical tests obtained p value = 0.001 (p <0.05), it can be concluded that there are differences in attitudes between schools holding PIK R with those who do not hold PIK R. The results of this study differs from the research of Ningrum (2014) the correlation test showed that there was a correlation between attitude toward KRR information with PIK R utilization. Unlike Rezeki research (2013) which showed that no significant attitude difference among the four schools in other words the student attitude about TRIAD KRR is the same in every school.

In this study, respondents in schools who did not hold PIK R showed more negative attitude, this is because of lack of information about TRIAD KRR that can affect the attitude of the adolescent. Attitude is closely related to one's knowledge. Teenagers who have good knowledge tend to have a positive attitude and vice versa.

**TRIAD KRR Differences Actions On Students Based on the Implementation of PIK R**

The result of statistical test obtained p value = 0,367 (p> 0,05), hence can be concluded that there is no difference of action between school which do PIK R with which do not hold PIK R. It can be concluded that PIK R not so much contribution to action TRIAD KRR in adolescence because its utilization is not maximal yet. And in schools that do not hold PIK R actor who may cause goodaction is a

factor of family norm and religious ius in adolescents. In contrast to research conducted by Situmorang (2016) in Deli Serdang which states that there is a relationship between sex education by parents with adolescent actions

In the formation of action is inseparable from the responsibilities of parents who provide education and inculcate moral and religious values, where the era has been more sophisticated and easy access to mass media can make teenagers can fall into the wrong. The environment also does not go unnoticed because bad environments can have a considerable effect on the way people act.

## CONCLUSION

There is a significant difference between the knowledge of the respondents at school who held PIK R and those did not hold PIK R. There is a significant difference between the respondents attitudes at school who held PIK R and those did not hold PIK R. There is a significant difference between the respondents actions at school who held PIK R and those did not hold PIK R.

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# EFFECTIVENESS OF PARENTING COUNSELING ON POSTPARTUM BLUES EVENTS IN THE WORKINGAREA OF LUBUK BUAYA COMMUNITY HEALTH CENTER IN 2017

**Aldina Ayunda Insani[1] Defrin[2], Shinta Aulia[3]**

*[1] Bachelor of Midwifery Program Faculty of Medicine Universitas Andalas Jln. Niaga no. 56 Padang, Indonesia*
*[2] Department of Obstetrics and Gynecology, Faculty of Medicine Hospital UNAND Dr. M. Djamil Padang, Indonesia*
*3[3]Bachelor of Midwifery Program Faculty of Medicine Universitas Andalas Jln. Niaga no. 56 Padang, Indonesia*
aldinaayundainsani@med.unand.ac.id[1]

**Abstract**

Postpartum blues occur in the first week after days 3-5 of labor, which occurs about 30% -80% in postpartum mothers. The purpose of this study was to determine the effectiveness of parenting counseling on postpartum blues incidence in the working area of Lubuk Buaya Community Health Center in 2017.

The type of this research is Pre-Experiment conducted in the work area of Lubuk Buaya Puskesmas in 60 mothers of primigravida aterm (experimental and control group) selected by purposive sampling technique. The experimental group was given 1 time parenting counseling. All data were collected using questionnaires and data analyzed using the Wilcoxon test and Mann Whitney test, considered significant if $p < 0.05$.

The results of all respondents study age is not risky. The 37 weeks maternal gestational age categories in the experimental and control group were 73.3% and 63.3% and middle-level maternal education in the experimental and control group were 66.7% and 56.7%. With p-value<0,05, it means that parenting counseling done to mother and her husband is effective to increase mother's knowledge about parents readiness and there is difference / decrease of postpartum blues event.

From the result of this study it can be conclude there is Parenting counseling performed on primigravida mothers is effective in improving maternal knowledge about parental readiness and there are differences in postpartum blues events between mothers given parenting counseling and those not given counseling. For further research can add more frequency of counseling

**Keywords** : Postpartum Blues, Parenting Counseling

## INTRODUCTION

Childbirth is one of the most important and happy events for women. However, some women experience mood disorders after childbirth which is a factor triggering the emergence of emotional, intellectual and behavioral disorders in a woman. Some women can adapt well so it will not be an ongoing problem, but for women who can not adapt to those changes will experience psychological disorders such as postpartum blues (Dewi and Sunarsih, 2012; Pitriani and Andriyani, 2014).

Postpartum blues or so-called baby blues is a mild ill-effects syndrome in the first week after childbirth that usually peaks on 3-5 days, usually disappears within 24-72 hours or at day 10 (Dewi and Sunarsih, 2012; Sinclair, 2009). According to Jones and Shakespeare (2014) postpartum blues occur about 30% - 80% in women after childbirth. Postpartum blues may progress to postpartum depression (7% and 19%) and do not rule out the incidence of postpartum depression increased and about 0.1% (1 in 1000) of labor progresses into postpartum psychosis.

Postpartum blues occur due to several factors, including due to physical and hormonal changes, adaptability, age and number of children, family support, husband, stress experienced by women

themselves such as not being able to breastfeed their babies, psychosocial background and unpreparedness for role change in the woman (Pitriani and Andriyani, 2014).

Based on research Fatmawati et al (2015) in Puskesmas working area of Yogyakarta city there are 46% of respondents experiencing postpartum blues and 54% of respondents do not experience postpartum blues. Postpartum blues occur most often in primiparas (62%) due to new primiparas entering their role as a mother. According to Wijayanti (2013) in the Blora Community Health Center, the incidence of postpartum blues in primiparous mothers is 17.4% higher compared to multiparous women.

Mothers who experience postpartum blues usually insomnia, often crying, anxiety, decreased concentration and irritability. As a result of the anxiety felt by the mother, the mother is obsessed with her baby or feels anxious to endanger her own baby so as to regard the baby as a burden for him (Saleha, 2009).

During pregnancy and before birth, health professionals should describe the early signs and symptoms of postpartum blues and tell the mother of how to cope with the postpartum blues (Orshan, 2008). Good self-preparation facing childbirth should be strengthened during pregnancy because the person who is going to be a parent feels worried about her ability as a parent, her partner's ability to be a parent or how to cope her mother and husband against parenting. Mothers are more likely to worry about physical appearance after delivery while their husbands are worried about the baby's effect on work and personal time (Pitriani and Andriyani, 2014; Varney, 2015).

The magnitude of risk for the mother and baby if experiencing this symptom, then made various efforts that start from the period of pregnancy. Early detection / screening of mood disorders is important so that the mood disorder is handled quickly and does not continue to be worse. To do the screening using the Edinburg Postnatal Depression Scale (EPDS) tool containing questions relating to the liability of feelings of anxiety, guilt, and covering things that include postpartum blues (Dewi and Sunarsih, 2012).

Some researchers have made some interventions to prevent postpartum blues, such as research conducted by Indriyanti (2014) Bina Keluarga Mandiri (BKM) proved to increase family independence in order to reduce the incidence of postpartum blues. Research conducted by Girsang et al (2015) proves that psychiatric psychiatry during postpartum period is effective in decreasing postpartum blues in primipara in adolescence.

Based on data from the health profile Padang (2015) Puskesmas Lubuk Buaya is an area that has a number of pregnant women and birth mothers highest number among the 22 health centers in Padang that the number of 2.146 pregnant women and 2.048 maternal (Department of Health, 2016)

Based on the above background, researchers are interested to examine the effectiveness of parenting counseling on postpartum blues events in the working area of Lubuk Buaya Community Health Center in 2017.

## METHODS

The type of this research is Pre-Experiment conducted in the working area of Lubuk Buaya Health Center in 60 mothers of primigravida aterm (experimental and control group) selected by purposive sampling technique from October to November 2017. The experimental group was given 1 parenting counseling. All data were collected using questionnaires and univariate and bivariate data analysis. Bivariate analysis using the Wilcoxon test and Mann Whitney test.

## RESULT

The number of respondents in this study were 60 primigravida mothers with term pregnancy (30 experimental group and 30 control group).

**Table 1 Distribution of Mother Age**

| Age (year) | Experiment | | Control | |
|---|---|---|---|---|
| | f (n=30) | (%) | f (n=30) | (%) |
| < 20 | 0 | 0,0 | 0 | 0,0 |
| 20-35 | 30 | 100,0 | 30 | 100,0 |
| > 35 | 0 | 0,0 | 0 | 0,0 |
| **Total** | 30 | 100 | 30 | 100 |

Based on the results of distribution in table 1 above can be seen that all respondents aged 20-35 years in the experimental group or control group (100%).

**Table 2 Distribution of Maternal Pregnancy Age**

| Pregnancy Age (week) | Experiment | | Control | |
|---|---|---|---|---|
| | f (n=30) | (%) | f (n=30) | (%) |
| 37 | 22 | 73,3 | 19 | 63,3 |
| 38 | 8 | 26,7 | 10 | 33,3 |
| 39 | 0 | 0 | 1 | 3,3 |
| 40 | 0 | 0 | 0 | 0 |
| 41 | 0 | 0 | 0 | 0 |
| 42 | 0 | 0 | 0 | 0 |
| **Total** | 30 | 100 | 30 | 100 |

Based on table 2 it can be seen that the 37 weeks of pregnancy age group in experiment and control group is 73.3% and 63.3%.

**Table 3 Distribution of Mother's Education**

| Education | Experiment | | Control | |
|---|---|---|---|---|
| | f (n=30) | (%) | f (n=30) | (%) |
| High | 10 | 33,3 | 12 | 40,0 |
| Secondary | 20 | 66,7 | 17 | 56,7 |
| Priary | 0 | 0 | 1 | 3,3 |
| **Total** | 30 | 100 | 30 | 100 |

Based on table 3 it can be seen that mothers are at secondary education level in experiment and control group is 66,7% and 56,7%

**Primigravida's mother's knowledge after being given parenting counseling**

Based on bivariate analysis of primigravida mother knowledge after given parenting counseling can be seen in table 4 and table 5

**Table 4 Wilcoxon Test Results Experiment Group**

| | Pretest – Posttest Experiment |
|---|---|
| Z | -4,405 |
| Asymp. Sig. (2-tailed) | 0,000 |

Table 4 shows that Wilcoxon (pretest-posttest) test results obtained by sig value in experimental group (0.000) <α (0,05), this result means that parenting counseling to mother and also her husband is effective to increase mother's knowledge about readiness to be parents.

**Table 5 Data Analysis Pretest-Posttest Experiment Group**

| | N | Mean | Std. Deviation | Min | Max |
|---|---|---|---|---|---|
| Pretest | 30 | 53,70 | 12,61 | 36,00 | 81,00 |
| Posttest | 30 | 73,53 | 7,98 | 63,00 | 100,00 |

Table 5 shows the average pretest value before treatment to the experimental group of 53,70 whereas after the treatment the posttest average score of 73,53. This means that the mean value after treatment in the experimental group is greater than the initial value. This value difference is significant so it can be said that giving parenting counseling can improve mother's knowledge about the readiness to become a parent.

**Table 6 Data Analysis Pretest-Posttest Control Group**

| | N | Mean | Std. Deviation | Min | Max |
|---|---|---|---|---|---|
| Pretest | 30 | 48,90 | 13,71 | 18,00 | 71,00 |
| Posttest | 30 | 48,00 | 11,16 | 27,00 | 72,00 |

Table 5 shows the mean value of pretest control group of 48,90 whereas the mean posttest score that was not given parenting counseling was 48,00. This means that there is no additional knowledge of mother about the readiness to be parents to mothers who are not given parenting counseling.

**Effectiveness of Parenting Counseling on Postpartum Blues Occurrences**

Based on the bivariate analysis of frequency of postpartum blues events after being given parenting counseling on experimental group and control group (posttest) can be seen in Table 7.

**Table7Frequency of Postpartum Blues Event After Giving Parenting Counseling In Experiment Group And Control Group (Posttest)**

| Konseling Parenting | Postpartum Blues | | | | Total | | OR (95% CI | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | No | | Yes | | | | | |
| | f | % | f | % | f | % | | |
| Experiment | 8 | 33,3 | 22 | 61,1 | 30 | 100 | 0,318 | 0,037 |
| Control | 16 | 66,7 | 14 | 38,9 | 30 | 100 | (0,108- | |
| **Total** | 24 | 40 | 36 | 60 | 60 | 100 | 0,938) | |

Table 7 shows the percentage of mothers who experienced postpartum blues after parenting counseling was lower than mothers who were not given parenting counseling (33.3%). Based on Mann Whitney statistic test results obtained p-value (0,037) <α (0,05), meaning there is difference of postpartum blues incidence between parenting counseling given with not given counseling which means effective parenting counseling to decrease postpartum blues event. Primigravida mothers who were given 1 parenting counseling had a 0.318-fold risk of having postpartum blues compared with those not given parenting counseling. (OR 0.318, 95% CI 0.108-0.938).

## DISCUSSION

### Primigravida Mother's Knowledge After Given Parenting Counseling in the Work Area of Lubuk Buaya Community Health Centers of 2017

Data analysis using Wilcoxon test obtained by sig value in experimental group (0.000) <α (0,05), this result means that parenting counseling done to mother and also her husband is effective to increase mother's knowledge about parent readiness.

The average pretest value before treatment to the experimental group was 53.70 while after the treatment the posttest average score was 73.53. This means that the mean value after treatment in the experimental group is greater than the initial value. This value difference is significant so it can be said that giving parenting counseling can improve mother's knowledge about the readiness to become a parent.

The mean value of pretest control group was 48.90 while the mean posttest score that was not given parenting counseling was 48.00. This means there is no addition of mother's knowledge about the readiness to be a parent to mothers who are not given parenting counseling. The likelihood of decreasing the mean score in the control group due to the inconsistency of respondents in answering the pretest-posttest question.

According to Notoadmodjo (2012) the level of one's knowledge can be influenced by several factors such as age, education level and experience. Mother's knowledge increases after being given parenting counseling with the media booklet. This is possible because the media booklet has the advantages can be studied independently because it is designed in the form of a book so that the mother can listen to what is delivered without having to record all the material delivered. Research conducted by Wijayanti (2015) at Gatak Public Health Center, booklet media is one of the print media that prioritizes visual messages in book form either writing or drawing. From the results of research conducted there is an increase in knowledge on pregnant women who are given counseling by using booklet media so as to change the attitude of the mother in maintaining her pregnancy for the better.

### Effectiveness of Parenting Counseling on Postpartum Blues Occurrence in the Work Area of Lubuk Buaya Community Health Center 2017

The results showed the percentage of mothers who experienced postpartum blues after being given parenting counseling lower than mothers who were not given parenting counseling (33.3%). Based on the statistical test, p-value 0,037 (p-value <0,05) means different postpartum blues incidence between parenting counseling and not given counseling. Primigravida mothers who were given 1 parenting counseling had a 0.318-fold risk of having postpartum blues compared with those not given parenting counseling. (OR 0.318, 95% CI 0.108-0.938)

The results of this study are in line with research Budihastuti, et al (2012), providing effective counseling in helping positive coping mechanism in the mother so that mothers tend not to experience stress. Likewise, the research conducted by Kenwa, et al (2015) the existence of the influence of counseling on the occurrence of stress on postpartum mothers in Public Health Center II and IV South Denpasar.

Parenting counseling is one of the experiments that can be given to the mother because the mother can excite the mother's feelings when counseling and can solve the problems experienced. Counseling is also conducted to the husband aims to make the husband know the role needed and needed by pregnant women to face delivery or after childbirth. The authority of midwife in running government program that is giving health service one of them provide integrated antenatal care for example doing parenting counseling (Nurdiyan, 2016). Health education given to a person will affect in doing attitude one of the behavior in maintaining pregnancy (Yulizawati, 2016).

According to research conducted by Kirana (2015) at Dustira Cimahi Hospital postpartum blues can be caused by maternal psychological factors in maternal pregnancy and childbirth are emotional problems that accompany childbirth and lack of support from husband or family. There are four wishes of mother in childbirth that is accompanied by the nearest person, get pain relief, get a sense of security from the nearest person to the baby and receive the baby, and get attention, affection and appreciated by the nearest person during childbirth.

## CONCLUSION

There is an addition of maternal knowledge after parenting counseling and parenting counseling performed on primigravidal mothers is effective in reducing postpartum blues events. For further research can increase the frequency of counseling and for health institutions to make parenting counseling as a model or preventive action and Perform psychological assessment using EPDS in a postpartum week

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# FACTORS RELATED TO PREGNANT WOMAN PARTICIPATION IN ATTENDING PREGNANCY CLASS IN WORK AREA OF LUBUK KILANGAN HEALTH CENTER IN 2017

**Hudila Rifa Karmia[1], Meilinda Agus[2], Shinta Maya Sari[3]**

[1] *Department of Obstetrics and Gynecology, Faculty of Medicine Hospital UNAND Dr. M. Djamil Padang, Indonesia*
[2] *Departmen of Diploma Midwifery, Poltekes Kemenkes Padang, Padang, Indonesia*
[3] *Departement of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
hudilarifakarmia@yahoo.co.id[1]

**Abstract**

Pregnancy class is a learning together platform in groups face to face which is expected to increase knowledge and skill of pregnant woman about pregnancy, childbirth, post childbirth, baby care, etc. woman's participation in pregnancy class help them to detect their pregnancy risk level. But the utilization for pregnancy class is still low. This study aims to determine factors related to pregnant's woman participation in attending pregnancy class in work area of lubuk kilangan health center.

This was quantitative study with cross sectional design, the study conducted in work area of Lubuk kilangan Health Center from September to October 2017. Respondents of this study was third trimester pregnant woman which is 60 people, with cluster sampling technique. Data Collected by quistionnaire. Data analysis was performed using univariate and bivariate.

The result showed 78.3% of pregnant woman never attend pregnancy class. Bivariate analysis shows there is no association between education level (p= 0,668), employment (p= 0,713), and distance of resident (p= 0,262), there is an association between knowledge (p= 0,045), exposure of information (p= 0,000), and support of husband (p= 0,021) with the participation of pregnant woman in attending pregnancy class in the work area of Lubuk Kilangan Health Center 2017.

There is an association between knowledge, exposure of information, and support of husband with the participation of pregnant woman in attending pregnancy class. For that reason, health proffesionals need to provide information and health education to community especially to pregnant woman and her husband regarding to pregnancy class

**Keywords** : Pregnancy class, knowledge, distance of residence, exposure of information,support of husband

## INTRODUCTION

One of the indicators used to assess the health of society is of morbidity and mortality in mothers and babies. TheKemenkes RI (2016), amounting to 20% of pregnancies are predicted to experience complications.Cases of obstetriccomplications are one cause of morbidity and mortality in mothers and babies (Dinkes Padang, 2016).

The World Health Organization (WHO) estimates the 830 women died each day from complications of pregnancy and childbirth. By the end of 2015, approximately 303.000 women died during and after pregnancy and childbirth. Meanwhile, 2.7 million babies die during the first 28 days of life and 2.6 million babies are born dead. Nearly all the deaths occurred because of the things that can be prevented (WHO, 2016).In Indonesia, cases of obstetric complications are bleeding, HDK, and the infection still dominate as the main causes of maternal mortality occurred (Dinkes Padang, 2016).

Government programs to prevent obstetric complications through the program, *Safe Motherhood*, there are four pillars one antenatal care (Prawirohardjo,2010). Antenatal examination on pregnancy and prenatal education administration. Antenatal class is a form of midwifery care in an effort to act early detection of complications by providing information that is more accurate and complete (Kemenkes RI, 2014).

Benefits of the implementation of antenatal class are able to do early detection independently, increasing the benefits of using KIA books, their interaction and sharing of experiences among the participants and the midwife. The final result expected is that every pregnant woman can pass through during pregnancy, childbirth, postpartum safely whose impact on the morbidity and mortality of mother and baby (Kemenkes RI, 2014).

The participation of pregnant mothers during class is a form of health behavior. Behavioral do and not do classroom visits of pregnant women are affected by several factors. According to *Lawrence Green* in Notoatmodjo (2012), that behavior is influenced by predisposing factors (age, education), enabling factors (distance, information) and factors (support for health care workers, family / husband).

Cases of maternal mortality in the city of Padang in 2015 was 17 cases (1%), an increase when compared to 2014 is 16 cases (0.09%) and 2013, namely 15 cases (0.08%). In addition, cases of BBLR in Padang also increased from 2013 by 1%, amounting to 1.74% in 2014 and 2015 was 2.17% (Dinkes Kota Padang, 2014; 2015; 2016).

Based on the health profile of the city of Padang 2015, seen that of Lubuk Kilangan health center have the number of births is 1,048 and the number of infant deaths of 7 people, 7 people and mothers toddlers 1 that occur when maternal age> 35 years. Compared with 2014, an increase in infant and child mortality. In addition, cases of low birth weight has increased every year for the years of 2013 by 2%, in 2014 3.9% and in 2015 by 4.6%. To overcome this, the need for the introduction of early detection in antenatal care by pregnancy class (Dinas Kesehatan Kota Padang, 2014; 2015; 2016).

Based Classroom Implementation Report Lubuk Kilangan Maternal Health Center in 2016, there were 1,093 pregnant women as a target of antenatal class implementation, so that the target of the execution of pregnant women's class was 100%. The percentage of pregnant women who attend antenatal class in the first quarter, II, III, IV respectively are 5.5%, 6.7%, 10.1% and 36%. Despite the increase, but is still said to be low compared with the target of antenatal class. (Puskesmas Lubuk Kilangan, 2016).

Preliminary survey conducted through interviews with midwives. Lubuk Kilangan health center is one of the health centers program has been implemented of antenatal class in the region. Implementation of antenatal class has indeed been executed in every village. But still many pregnant women in the Lubuk Kilangan health center who have not utilized these facilities optimally pregnant women.

Based on the above background of researchers interested in knowing Factors Related To Pregnant Woman Participation In Attending Pregnancy Class In Work Area Of Lubuk Kilangan Health Center In 2017.

## METHODS

This study was a quantitative study with cross sectional design, thestudy conducted in work area of Lubuk kilangan Health Center from September to October 2017. Respondents of this study was third trimester pregnant woman which is 60 people, with cluster sampling technique. Data Collected by quistionnaire. Data analysis was performed using univariate and bivariate.

## RESULT

**Table 1 Distribution of Participation in Pregnancy Classes**

| Class Participation Pregnancy | f | Percentage (%) |
|---|---|---|
| Never | 47 | 78.3 |
| Ever | 13 | 21.7 |
| **Total** | **60** | **100.0** |

Based on table 1 above it can be seen that out of 60 respondents, most respondents never take a class that is 78.3% of pregnant women.

**Table 2 Distribution of Education Level**

| Education | f | Percentage (%) |
|---|---|---|
| Low (<SMA) | 9 | 15.0 |
| High (≥ SMA) | 51 | 85.0 |
| **Total** | **60** | **100.0** |

Based on table 2 above can be seen that out of 60 respondents, mostly high-educated respondents (85.0%)

**Table 3 Distribution of Employment**

| Work | f | Percentage (%) |
|---|---|---|
| Working | 13 | 21.7 |
| Not working | 47 | 78.3 |
| **Total** | **60** | **100.0** |

Based on table 3 above it can be seen that out of 60 respondents, mostly of the respondents did not work (78.3%)

**Table 4 Distribution of Knowledge**

| Knowledge | f | Percentage (%) |
|---|---|---|
| Less Good | 19 | 31.7 |
| Good | 41 | 68, 3 |
| **Total** | **60** | **100.0** |

Based on table 4 it can be seen that out of 60 respondents, most respondents have good knowledge about the antenatal class (68.3%).

**Table 5 Distribution of Distance of Residence**

| Distance of residence | f | Percentage (%) |
|---|---|---|
| Far | 13 | 21.7 |
| Near | 47 | 78.3 |
| **Total** | **60** | **100.0** |

Based on table 5 above it can be seen that out of 60 respondents, most respondents have a place to near distance to the health center Lubuk Kilangan(78.3%).

**Table6Distribution of Exposure of Information**

| Exposure of information | f | Percentage (%) |
|---|---|---|
| Less | 33 | 55.0 |
| Good | 27 | 45.0 |
| **Total** | **60** | **100.0** |

Based on table 6 above it can be seen that out of 60 respondents, most respondents have exposure of information the antenatal class less (55.0%).

**Table 7 Distribution of Support of Husband**

| Support of husband | f | Percentage (%) |
|---|---|---|
| Don't Support | 37 | 61.7 |
| Supports | 23 | 38.3 |
| **Total** | **60** | **100.0** |

Based on table 7 above it can be seen that out of 60 respondents, the majority of respondents did not support her husband in antenatal class (61.7%).

**Table 8 Relatonship Education Level with Participation of Pregnancy Classes**

| Education Level | Participation of Pregnancy Class | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Never | | Ever | | | | | |
| | n | % | n | % | n | % | | |
| Low | 8 | 88,9 | 1 | 11,1 | 9 | 100 | 2,462 (0,279-21,715) | 0,668 |
| High | 39 | 76,5 | 12 | 23,5 | 51 | 100 | | |
| **Total** | **47** | **78,3** | **13** | **21,7** | **60** | **100** | | |

Table 8 shows that the percentage of pregnant women who never had participated of pregnancy class is more on mothers with low education levels (88.9%) compared to mother with higher education (76.5)%. Based on statistical test p value = 0.668 (p> 0.05), it means there is no relationship between the education level of pregnant women with the participation of pregnancy class in Lubuk Kilangan Health Center, Padang City in 2017.

**Table 9 Relationship Employment with Participation of Pregnancy Classes**

| Work | Participation of Pregnancy Class | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Never | | Ever | | | | | |
| | n | % | n | % | n | % | | |
| Working | 11 | 84,6 | 2 | 15,4 | 13 | 100 | 1,681 (0,322-8,760) | 0,713 |
| Not Working | 36 | 76,6 | 11 | 23,4 | 47 | 100 | | |
| **Total** | **47** | **78,3** | **13** | **21,7** | **60** | **100** | | |

Table 9 shows that the percentage of pregnant women who never had participated of pregnancy class is more for unemployee mothers (84.6%) compared to employee mothers (76.6%).Based on statistical test p value = 0.713 (p> 0.05), it means there is no relationship between the employment of pregnant women with the participation of pregnancy class in Lubuk Kilangan Health Center, Padang City in 2017.

**Table 10 Relationship Knowledge with Participation of Pregnancy Classes**

| Knowledge | Participation of Pregnancy Class | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Never | | Ever | | | | | |
| | n | % | n | % | n | % | | |
| Less good | 18 | 94,7 | 1 | 5,3 | 19 | 100 | 7,448 (0,891-62,244) | 0,045 |
| Good | 29 | 70,7 | 12 | 29,3 | 41 | 100 | | |
| **Total** | **47** | **78,3** | **13** | **21,7** | **60** | **100** | | |

Table 10 shows that the percentage of pregnant women who never had participated of pregnancy class is more on pregnant women with less good knowledge (94.7%) compared to pregnant women with good knowledge (70.7%). Based on statistical test p value = 0.045($p \leq 0.05$), it means there is a significant relationship between the knowledge of pregnant women with the participation of pregnancy class in Lubuk Kilangan Health Center, Padang City in 2017.

**Table 11 Relationship Distance of ResidencewithParticipation of Pregnancy Classes**

| Distance of residence | Participation of Pregnancy Class | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Never | | Ever | | | | | |
| | n | % | n | % | n | % | | |
| Far | 12 | 92,3 | 1 | 7,7 | 13 | 100 | 4,114 (0,483-35,066) | 0,262 |
| Near | 35 | 74,5 | 12 | 25,5 | 47 | 100 | | |
| **Total** | **47** | **78,3** | **13** | **21,7** | **60** | **100** | | |

Table 11 shows that the percentage of pregnant women who never had participated of pregnancy class is more on pregnant women who have a distance of far (92.3%) compared with mothers who have a place to near distance (74.5%). Based on statistical test p value = 0.262 (p>0.05), it means there is no relationship between distance of residence with the participation of pregnancy class in Lubuk Kilangan Health Center, Padang City in 2017.

**Table 12 Relationship Exposure of Information with Participation of Pregnancy Classes**

| Exposure of Infrmation | Participation of Pegnancy Class | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Never | | Ever | | | | | |
| | n | % | n | % | n | % | | |
| Less | 32 | 97,0 | 1 | 3,0 | 33 | 100 | 25,600 (3,042-215,462) | 0,000 |
| Good | 15 | 55,6 | 12 | 44,4 | 27 | 100 | | |
| **Total** | **47** | **78,3** | **13** | **21,7** | **60** | **100** | | |

Table 12 shows that the percentage of pregnant women who never had participated of pregnancy class is more on pregnant women with less exposure of information (97.0%) compared to pregnant women with good exposure of information (55.6%). Based on statistical test p value = 0.000($p \leq 0.05$), it means there is a significant relationship between exposure of information with the participation of pregnancy class in Lubuk Kilangan Health Center, Padang City in 2017.

**Table 13 RelationshipSupport of Husband with Participation of Pregnancy Classes**

| Support of Husband | Participation of Pregnancy Class | | | | Total | | POR (95% CI) | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Never | | Ever | | | | | |
| | n | % | n | % | n | % | | |
| | 33 | 89,2 | 4 | 10,8 | 37 | 100 | | |
| Don't supportSupport | | | | | | | 5,304 (1,398-20,122) | 0,021 |
| **Total** | 14 | 60,9 | 9 | 39,1 | 23 | 100 | | |
| | **47** | **78,3** | **13** | **21,7** | **60** | **100** | | |

Table 13 shows that the percentage of pregnant women who never had participated of pregnancy class is more on mother with a husband that doesn't support (89.2%) compared to mother with a supportive husband (60.9%). Based on statistical test p value = 0.021($p \leq 0.05$), it means there is a significant relationship between support of husband with the participation of pregnancy class in Lubuk Kilangan Health Center, Padang City in 2017.

## DISCUSSION

### Relatonship Education Level with Participation of Pregnancy Classes

Bivariate analysis results show that there is a is no relationship between education level of pregnant women with the participation of pregnancy class with p-value = 0.668 (p> 0.05).

These results are consistent with research of Ayuningrum (2015 ) in the work area PKM Sumowono, shows that there is no relationship of education level of pregnant women with classroom visits for pregnant women. This is because higher education is not always a positive effect on behavior and vice versa.

The education level of awareness and knowledge related to someone. Normally a person with low education, lack of awareness and a good knowledge of the benefits of health care. However, it should be emphasized that a low education does not mean absolute low knowledgeable (Notoatmodjo, 2010). This is because of one's education is not only derived from formal education, because the non-formal education can affect the level of knowledge of the mother, such as counseling, mass media, both alone and in the experience of others (Kusumaningsih, 2015).

Based on these results it can be seen that the level of maternal education either low or high does not affect the behavior of pregnant women in pregnant women do classroom visits. This is because pregnant women with low or high education equally aware of the health pentinnya that affect health care utilization such as antenatal class. Pregnant women who are highly educated, but do not have the awareness and knowledge about the antenatal class will lead to a lack of their desire to attend antenatal class.

### Relationship Employment with Participation of Pregnancy Classes

Bivariate analysis results show that there is a is no relationship between employment of pregnant women with the participation of pregnancy class with p-value = 0.713 (p> 0.05).

This is in line with research Masini (2015), shows that there is no relationship between the level of employment of pregnant women with class participation pregnant women. In contrast to research Fawzia (2014), showed no employment relationship with the participation of antenatal class.

The results of this study is different from the theory put forward by Priyoto (2014), states that the mother's occupation is one of the factors that influence the utilization of health services.Mothers who do not work have more time to take advantage of health services. In pregnant women who work, work provides additional busyness, so that pregnant women sometimes do not have time to attend a antenatal class (Priani, 2012).

However, based on the results of this study shows that the employment status does not affect pregnant women to participate in a antenatal class. It is right to draw both the mother who works and who does not work in fact have the same opportunities to attend a antenatal class. This is because women who become homemakers also have something to do to take care of children and housework. So that mothers who do not work and have the same work busyness, which will affect the chances of mother to attend a antenatal class. Working mothers can still participate in a class of pregnant women, but the mother should be able and able to set the time and took the decision to participate in a antenatal class. To that end, the role of health workers and volunteers needed to be more active in promoting maternal health related classes both in women who are working or not working.

**Relationship Knowledge with Participation of Pregnancy Classes**

Bivariate analysis results show that there is a significant relationship between knowledge of pregnant women with the participation of pregnancy class with p-value = 0.045 ($p \leq 0.05$).

These results are consistent with research Rosady (2016) in Payakumbuh, shows that there is a relationship between classroom knowledge with the participation of pregnant women attend classes. In contrast to the results of research conducted by Mahdiyah et al (2017) in the village of gnashing Hanyar, it was found that there was no association with the mother's knowledge class participation pregnant women.

This result is consistent with the theory developed by Lawrence Green, that knowledge is a predisposing factor that determines a person's behavior. Knowledge is required as initial motivation in fostering confidence so it is said that knowledge is a stimulus to the actions of a person (Henry and Goddess, 2010). Behavior that is based on the knowledge would be more meaningful than the behavior that is not based on knowledge (Notoadmodjo, 2010). According Boerleider et al (2013), lack of knowledge of health programs for antenatal class are factors that create risk mothers do not follow a prenatal education adequately.

Mothers who are knowledgeable both will be more open-minded so it will be easy to accept new things such as antenatal class. This is because, they have a right thinking and right of antenatal class. They know that the antenatal class is a learning tool that is very useful for pregnant women related to pregnancy, thereby motivating them to follow a antenatal class, while women who have less knowledge would hinder the development of attitude because the mother does not know what are the benefits of antenatal class, so mothers tend to not care and did not participate in a antental class (Chasanah and Ratifah, 2013; Nisauddyni et al, 2014).

Judging from the results of research in the field, who never took part in group classes of pregnant women are more dominant than mothers who have poor knowledge (94.7%). The role of health workers is essential in improving the knowledge of pregnant women about the antenatal class. Where things can be done by health workers is through education and counseling pregnant women about the importance of the class. In addition, awareness of pregnant women are also needed to improve the knowledge related to the antenatal class, where pregnant women can increase their knowledge and insights to seek information through the mass media such as the internet.

**Relationship Distance of Residence with Participation of Pregnancy Classes**

Bivariate analysis results show that there is no relationship between distance of residence of pregnant women with the participation of pregnancy class with p-value = 0.262 ($p > 0.05$).

This is not in accordance with the research Kartini (2012), which states that the health care site that location is not strategic or difficult to achieve by the mothers of pregnant women leads to reduced access to health services. In line with research Nurdiyan et al (2014) at Malalak Health Center, showed

that one of the obstacles to the implementation of antenatal class is the place where the implementation of antenatal class is too far from where to live.Affordability relates to the utilization of maternal-class service for affordability place of execution of pregnant women easy class will support pregnant mothers attend classes. The distance between the residence with a negative effect on the health service health service reception. This can result in the emergence of a feeling lazy or reluctant to go to the health service and expectant mothers attend classes (Wahyuni, 2012).

The results showed that respondents with a distance of residence to a health facility near and far are equally likely to do or not do classroom visits for pregnant women. Distance residence close is not always a positive effect on behavior, including in terms of classroom visits of pregnant women and vice versa. This is because when the mother has the motivation and knowledge of antenatal class, he will come to health facilities for pregnant women to attend classes regardless of their demographic factors such as distance. In addition, although the availability and affordability of health services are adequate, but its use is still dependent on the accessibility of mother-to information obtained by the mother of the antenatal class who have an impact on the mother's knowledge and can not be separated from husband support received by mothers in antenatal class. This indicates there are other factors besides distance of residence associated with classroom visits of pregnant women, such as knowledge, exposure of information and support of husband.

**RelationshipExposure of Information with Participation of Pregnancy Classes**

Bivariate analysis results show that there is a significant relationship between exposure of information with the participation of pregnancy class with p-value = 0.000 ($p \leq 0.05$).

This is in line with Yuliantika study (2016) in Puskesmas Sukolilo 2, also found that there is a link availability of information with the participation of pregnant women in pregnant women follow the class program.

This is consistent with the theory put forward by Lawrence Green that the factors supporting the participation of one of them is information (Notoatmodjo, 2012). Ease of obtaining some information will accelerate a person to obtain new knowledge. In the group of pregnant women who were given information about the antenatal class through health professionals, print and electronic media to increase awareness and participation of mothers in pregnant women attend classes (Priani,2012).

Availability of information class can pregnant women from the mass media channels such as print media, electronic media(TV, radio, and internet) and interpersonal channels. Application to two communication channels will have an impact on the optimal deployment of information that influence behavior change. So, not only fixated on information from health professionals only (Kemenkes RI, 2010; Priyoto, 2014).

Judging from the results of research in the field, the group who never took part in a antenatal class more, the dominant comes from mothers who lack the availability of information (97.0%). In the group who had joined the class of pregnant women are more dominant than mothers get good information availability (44.4%). Sources of information obtained from health professionals, the media, etc. But behavioral change can occur when mothers get pregnant women information about classes directly from the concierge health or midwife as well as by the masses of media, both print and electronic.

**RelationshipSupport of Husband with Participation of Pregnancy Classes**

Bivariate analysis results show that there is a significant relationship between support of husband with the participation of pregnancy class with p-value = 0.021 ($p \leq 0.05$).

The results are consistent with research Astuti et al (2016) in PKM Candiroto Kab.Temanggung, suggests that mothers who had the support of a husband has the opportunity to attend antenatal class than women who are not supported by her husband. This fits well with Nugraheny research and Norhayati (2016), demonstrated an association husband's support and participation of mothers in pregnant women attend classes.

This suggests that the results of this study in accordance with the opinion of Widiantari (2015), namely that the higher the support of husband to wife the more it will improve attitudes and behavior towards the positive wife in this case the behavior of the mother to participate in antenatal class. This is because, build self-awareness someone to participate following a required program their internal motivation and external support. External support can be given by the people closest to that as the support of her partner (Septiani, 2013).

This is consistent with the theory that suggests Lamb three components, namely the engagement, accessibility, and responsibility, which are related to each other in determining the level of involvement of the husband during pregnancy. Accessibility refers to the physical presence both at home and husband in prenatal activities. Involvement refers to the direct interaction with the mother's husband as active participation in prenatal activities. The responsibility is embodied in a husband's role as caregivers, providers, builder and protector (Alio et al, 2013)

According to Mosunmola et al (2014), support the husband in prenatal care is the most important factor in promoting the health of pregnant women. Husband's involvement in a class of pregnant women to help her husband in knowing the state of their wives, and also foster a sense of shared responsibility for pregnancy, childbirth, infant care, etc.

Pregnancy class to help her husband provide an opportunity to understand how the role or how they can support their partners during pregnancy, labor and delivery, and to prepare to become parents (Shia, 2013; Smyth, 2015). Husband's presence during class pregnant women can lead to physical and emotional support to the mother's terrific. (Krysa, 2016).

According to research Lewis (2015), stressed that it is important to involve husbands in maternal and child health. Recognizing the husband's role as a key step and part of the solution in improving maternal health. Thus, there is a need to include husband right in the promotion of maternal health. Therefore, health professionals need to emphasize how important it is for her husband to get involved and support their wives during pregnancy.

Based on the results of this research note there is influence between husband support to the participation of pregnant women pregnant mothers attend classes. This is because there is the influence of respondents who never attend classes most of the pregnant women did not have the support of her husband. This is because the husband is busy working, the husband did not know what the antenatal class, and a perception that it is a wife's affair.

## CONCLUSION

There is no relationship between education level, employment and distance of residence with the participation of pregnant women in the pregnancy classes

There is a relationship between knowledge, exposure of informationand support of husband with the participation of pregnant women in the pregnancy classes

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# THE RELATIONSHIP OF WOMEN's CHARACTERISTICS WITHVISUAL INSPECTION OF ACETIC ACID TEST OUTCOME IN PADANG PASIR PUBLIC HEALTH CENTRE AREA 2017

**Hardisman [1], Sunesni [2], Silvia Mardiah[3]**

[1]*Departmen of Medicine Community Science, Faculty of Medicine, Universitas Andalas, padang, Indonesia*

[2]*Health Polytecnic Mercu Bakti Jaya Padang, Padang, Indonesia*

[3] *S1 Midwifery Study Program FK UNAND, Jln. Niaga no. 56 Kota Padang ,, 25127, Indonesia*

hardisman@med.unand.ac.id[1]

**Abstract**

Cervical cancer is one of the causes of death of the two women in Indonesia. Early detection is important to reduce the incidence of cervical cancer. Early detection of cervical cancer using IVA (Visual Acetate Acid Inspection) method is an effective and efficient examination in terms of time, method and cost.

This study aims to determine the relationship between the characteristics of women of childbearing age and the results of IVA examination in the work area of the desert health center in 2017. The type of this study was observational analytic with a *case control study design*. The population is divided into two, case groups (all women of childbearing age with positive IVA examination results) and control groups (all women of childbearing age with negative IVA examination results). The sampleis 46 people taken by *simple random sampling* sizewith case comparison: control (1: 1). Data obtained from patient medical records. Data analysis used was univariate and bivariate usingstatistical test *Chi square*.

The results of this study indicate that the factors associated with the results of IVA examination include age (p = 0.012), homonal family planning history (p = 0.007) and education (p = 0.011).While the factors that have no relationship are parity and a history of cervical cancer screening. Women aged ≥ 35 years, having a history of hormonal contraceptive use and coming from basic education will be more at risk for obtaining IVA positive examination results.

**Keywords** : cervical cancer, IVA, age, hormonal family planning history, education, parity, history of cervical cancer screening.

## INTRODUCTION

Cancer is a disease characterized by uncontrolled growth and spread of abnormal cells (*American Cancer Society*, 2017). Cancer cells continue to grow, divide and formnew abnormal cells. Some types of cancer often spread to other parts of the body through blood circulation or lymph vessels or known as metastasis (Sudhakar, 2009).Cancer is also one of the main causes of death worldwide (Ministry of Health, 2015).

Based on GLOBOCAN data, the *International Agency for Research on Cancer* (IARC) obtained data that in 2012 there were around 14.1 million new cancer cases and 8.2 million cancer deaths in the world. One of the most common types of cancer found in women is cervical cancer. Cervical cancer is the fourth leading cause of death in women worldwide with an estimated 265,700 deaths in 2012. Nearly 90% of deaths in developing countries are caused by cervical cancer such as 60,100 deaths in Africa, 28,600 deaths in Latin America and the Caribbean, and 144,400 deaths in Asia (*Global Cancer Statistics*, 2012).

Cervical cancer occurs in 522,354 women in Indonesia (Riskesdas, 2013). Cervical cancer is a cancer with the highest prevalence of 0.8 per 1000 population (Ministry of Health RI, 2015). The high level of cervical cancer is due to the low participation of women in early detection, where women who did IVA (Visual Acetic Acid Inspection) from 2007-2016 were only 5.15% (Ministry of Health Republic of Indonesia, 2017). Women often do not know the beginning of cervical cancer so that when it comes to women's health services it is already in an advanced stage (Kusumawati, 2016). For that, it is important to do early detection of cervical cancer.

Early detection of cervical cancer can be done bymethod *pap smear* and IVA examination, but the preferred method is IVA examination because this method is considered more effective and efficient in terms of time, method and cost (Juanda, 2015). In addition, this method has also met the basic criteria of early detection (safe, practical, affordable, available) and has several advantages that can be used in areas that have less facilities, the results of the examination can be immediately known by the client and treatment can be done immediately after the results are known inspection (Paskorn, 2010). If already seen precancerous cervical lesions or the results of a positive IVA examination in women of childbearing age are likely to become cancer within 3-17 years that will come if not treated immediately (MOH, 2009). Women of childbearing age who are recommended for screening are women aged 30-50 years at least once every 5 years, if possible every 3 years (MOH, 2009).

According to Adam, et al. (2017) some characteristics of women of childbearing age that influence the results of IVA examination are age and parity because of the results of the study positive IVA results were found in all women aged> 40 years and 66.7% of mothers with high parity. In addition, 95.5% of women who had previously used hormonal KB> 4 years were tested positive for cervical precancerous lesions (Pradya, 2015). And some of the factors that influence the results of IVA examination indirectly are age, education, previous cervical cancer screening history and history of vaginal discharge (Nuranna, 2017).

Based on age distribution, about 83.1% of women who underwent IVA were in the age range of 20-49 years with a median of 38 years because most women married at the age of 20 years and began taking IVA examinations over 20 years of age (Nuranna et al. 2017). But cervical cancer is rarely found in women aged <35 years because this cancer takes about 10-20 years to develop into cancer cells (Savitri, 2015). This is in line with the research conducted by Wahyuningsih (2014) that women aged ≥35 years are at 5.86 times the risk of cervical precancerous lesions compared to women <35 years.

Women who often experience pregnancy and childbirth are prone to cervical cancer because before experiencing pregnancy the woman will go through the stage of marriage or have sexual relations. The parity at risk for cervical cancer is to have a number of children> 3 and the distance of labor is too close. Childbirth triggers abnormal cell changes in the cervical epithelium and will develop into malignancy (Lestari, 2011).

Women of childbearing age who use hormonal contraception ≥5 years have a 10.7 times higher risk of developing cervical precancerous lesions compared to women who use non hormonal contraception and use <5 years increases the risk 3 times more likely to experience precancerous cervical lesions (Parwati, 2015) .

Education plays an important role in increasing women's knowledge after being given interventions to women who are highly educated than those with low education (Ahmed et al, 2016). This is evidenced by a study conducted by Damayanti (2013) that women with low education are four times more at risk of developing cervical cancer compared to highly educated women.

The low participation of women is due to shame and lack of information about the IVA examination process (Basuki et al, 2014). This is evidenced by the results of research conducted by Adam et al (2017) that women who have never had an IVA examination in the 25-35 year age range are 3.9% and aged 36-49 years are 23.1%. So, some characteristics of women of childbearing age who influence the results of IVA examination are age, parity, hormonal family planning history, education and previous history of cervical cancer screening.

The Province of West Sumatra in carrying out the IVA examination has exceeded Indonesia's coverage of 7.16% in 2016 (Ministry of Health RI, 2017). Among all cities and regencies in West Sumatra, the most positive IVA was found in South Solok Regency, which was 6.6% and followed by Kota Padang 4.4% in 2016 (Report of the Health Office of West Sumatra Province, 2017). The highest IVA examination results in Padang City were the highest found in the Padang Pasir Health Center, which was 9.75% and the percentage of IVA visits at the puskesmas was 54.94% in 2017. The Sandbar Puskemas had a total of 24,900 fertile women (WUS) and 10,958 Fertile Age Couples (EFA). In addition, the Sand Dunes Puskemas is a Kriotherapy referral health center in the City of Padang (Report of the Padang City Health Office, 2018).

Based on the description above, it is necessary to do more research on the relationship of characteristics of women of childbearing age with the results of the IVA examination in the work area of the Padang Sand Public Health Center in 2017

**II. Method**

Research is an observational analytic study with a *case control study design*. The population is divided into two, case groups (all women of childbearing age with positive IVA examination results) and control groups (all women of childbearing age with negative IVA examination results). The sample size is 46 people taken by *simple random sampling* with a comparison of cases: control (1: 1). Data obtained from patient medical records. Data analysis was univariate and bivariate with analysis *chi-square*($p \leq 0.05$).

**Results**

**Univariate Analysis**

**Table 1. Frequency Distribution of Characteristics of Reproductive Aged Women Affecting the Results of VIA Examination in the Working Area of Padang Pasir Health Center in 2017**

| Characteristics ofAge Women | | Results of VIA | | | |
|---|---|---|---|---|---|
| | | Case VIA Positive n = 46 | | Control VIA Negative n = 46 | |
| | | f | % | f | % |
| Age | ≥ 35 years | 30 | 65.2 | 18 | 39.1 |
| | <35 years | 16 | 34.8 | 28 | 60.9 |
| Parity | ≥3 | 20 | 43.5 | 15 | 32.6 |
| | <3 | 26 | 56.5 | 31 | 67.4 |
| Contraception History | Ever | 31 | 67.4 | 18 | 39.1 |
| Hormonal | Never | 15 | 32.6 | 28 | 60.9 |
| Education | Primary | 12 | 26.1 | 3 | 6.5 |

| | | | | | |
|---|---|---|---|---|---|
| | Height | 34 | 73.9 | 43 | 93.5 |
| History of Cervical Cancer Screening | Never | 32 | 69,6 | 28 | 60.9 |
| | Ever | 14 | 30,4 | 18 | 39.1 |

From table 1. above shows that the frequency of age of women of childbearing age in the case group is more common at age ≥35 years (65.2%), the parity frequency distribution in the most cases is parity group <3 (56.5%), for hormonal family planning history, the highest frequency distribution in the case group was in groups that had used KB hormones (67.4%), the highest frequency distribution of education in the case group is a group of women of childbearing age who come from higher education or who have completed high school, diploma / undergraduate education (73.9%) and for a history of cervical cancer screening , the highest frequency distribution in the case group was the group that had never had cervical cancer screening before (69.6%).

**Bivariate Analysis**

**Table 2. Relationship between Characteristics of Reproductive Aged Women Affecting the Results of VIA Examination in the Working Area of Padang Pasir Health Center in 2017**

| Characteristics ofAge Women | | Results of VIA | | | | OR (95% Cl) | *P-value* |
|---|---|---|---|---|---|---|---|
| | | Case VIA Positive n = 46 | | Control VIA Negative n = 46 | | | |
| | | f | % | f | % | | |
| Age | ≥35 years | 30 | 65,2 | 18 | 39,1 | 2,917 (1,249--6,809) | 0,012 |
| | <35 years | 16 | 34,8 | 28 | 60,9 | | |
| Parity | ≥3 | 20 | 43,5 | 15 | 32,6 | 1,590 (0,681-3,714) | 0,283 |
| | <3 | 26 | 56,5 | 31 | 67,4 | | |
| Contraception History | Ever | 31 | 67,4 | 18 | 39,1 | 3,215 (1,368-7,557) | 0,007 |
| Hormonal | Never | 15 | 32,6 | 28 | 60,9 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Education | Primary | 12 | 26,1 | 3 | 6,5 | 5,059 (1,321-19,373) | 0,011 |
| | Height | 34 | 73,9 | 43 | 93,5 | | |
| History of Cervical Cancer Screening | Never | 32 | 69,6 | 28 | 60,9 | 1,469 (0,620-3,483) | 0,381 |
| | Ever | 14 | 30,4 | 18 | 39,1 | | |

**1. Relationship Age WUS with IVA Examination Results in the Sandstone Puskesmas Work Area in 2017**

Based on table 2 it was found that respondents in the age group ≥ 35 years with positive VIA examination results (65.2%) were more than respondents who received n negative VIA examination results (39.1%).

Statistical test results *Chi-square* with *p value* is 0.012 which shows that there is a significant relationship between age and positive IVA examination results. With an OR = 2.917, which means that women of childbearing age with a risk of 2.917 times are at risk of getting a positive VIA examination compared to women of childbearing age with no risky age.

**2. Parity Relationship with IVA Examination Results in the Sandstone Health Center Work Area in 2017**

Based on table 2 it can be seen that respondents in the parity group ≥ 3 who received positive IVA examination results (43.5%) were more than respondents who received negative VIA examination results. (32.6%).statistical test results*Chi-square* with *p value* is 0.283 which shows no significant relationship between parity with the results of positive IVA examination.

**3. Relationship between Hormonal Family Planning History and IVA Examination Results in the Sandstone Health Center Work Area in 2017**

Based on table 2 it can be seen that respondents in the hormonal family planning group had more positive VIA examination results (64.7%) than respondents with examination results Negative IVA (39.1%).

Chi-square statistical test results with *p value* is 0.007 which means there is a significant relationship between hormonal family planning history and the results of IVA examination. With an OR value = 3.215 which means that women of childbearing age who have used hormonal contraceptives 3,215 times are at risk of getting positive VIA results compared to women who have never used hormonal contraception.

**4. Relationship of Education with IVA Examination Results in the Sandstone Health Center Work Area in 2017**

Based on Table 2 it can be seen that respondents in the basic education group with positive VIA examination results (26.1%) were more than the results of negative VIA examination (6.5 %).

Chi-square statistical test results with *p value* is 0.011, which means that there is a meaningful relationship between education and positive VIA examination results. With a value of OR = 5.059 which means that women of childbearing age who are from primary education are graduated from elementary

school or junior high school are at risk of 5,059 times to get a positive VIA examination compared to women of childbearing age who come from higher education.

**5. Correlation of Cervical Cancer Screening History with IVA Examination Results in the Sandstone Health Center Work Area in 2017**

Based on Table 2 it can be seen that respondents in the group that had never had previous cervical cancer screening with positive VIA examination results (69.6%) were more than group with negative VIA examination results (60.9%).

Chi-square statistical test results with *p value* is 0.381 which shows no significant relationship between the history of cervical cancer screening with the results of VIA examination.

## DISCUSSION

**1. Role of Age**

Risk of HPV infection is very common in young women. A small percentage of all HPV infections can develop into cancer (Nurtini, 2017). HPV infection first usually occurs at the age of 26-30 years followed by the development of 2 or 3 precancerous precancerous or neoplasmic lesions (NIS 2 or NIS 3) in the next 5-15 years and the peak of cervical cancer is 40-45 years (Chan *et al*, 2010).

In this study, respondents in the case group were more at risk age or ≥ 35 years, while in the control group more were at the age of not at risk or <35 years.

With a *p value* of 0.012 this shows a relationship between age and the results of a positive VIA examination. With an OR value = 2.917 which means the risk for the occurrence of positive VIA examination with age ≥ 35 years is 2.917 greater than mothers with age <35 years.

This is in line with the research conducted by Purwaningsih (2016) at the Karanganyar Health Center, which also found that most of the study respondents were at risky age, ie 63.4% in the case group and 36.6% in the control group and had a *p value* of 0.014 and a value OR = 3.095, which means that women with a risk of 3.095 times more likely to experience positive IVA results than women of no risk.

**2. Parity The**

number of children born has an effect on cervical cancer. Parity is one of the risk factors for cervical cancer with a risk of 4.55 times for cervical cancer in women with parity> 3 compared to women with parity 3. This is related to the occurrence of cervical columnary epithelium during pregnancy which causes new dynamics of immature metaplastic epithelium can improve cell transformation and trauma to the cervix so as to facilitate the occurrence of HPV infection (Hidayat *et al*, 2014).

In this study it is known that there is no relationship between parity with the results of IVA examination, this is caused by the number or percentage of parity <3 more in the case and control group so that it does not affect the VIA examination results with a *p value* of 0.283. In line with the research conducted by Putra (2012) in Buleleng Regency which concluded that there was no significant relationship between the amount of parity and the incidence of positive VIA test with a *p value of* 0.263.

**3. History of KB Hormonal**

Steroid contraception has a mechanism that can help HPV develop tumorigenic effects on cervical tissue. Steroids are thought to bind to DNA sequences that are specific in *transcriptional regulatory regions* of HPV DNA that can increase or suppress transcription of various genes. *Upstream regulatory region* (URR) of the HPV-16 viral genome mediates the control of HPV genome transcription and is thought to contain trigger elements that can be activated by steroid hormones (Moodley, 2003).

The percentage of respondents who had a history of hormonal contraceptive use was found more in the case group while in the control group the percentage of respondents who had never used hormonal family planning was found to be more than those who had used hormonal contraception so that it affected the results of VIA examination. With a *p value* of 0.007 and an OR value = 3.215, which means that the risk of getting a positive VIA examination on women who have used hormonal contraception is 3.215 greater than women who have never used hormonal contraception.

The results of this study are in line with research conducted by Reis (2011) in Istanbul, Turkey which concluded that there was a relationship between the history of hormonal contraceptive use and the results of IVA examination with a *p value of* 0.001.

**4. Education**

Education affects the level of understanding in the community, a person often does not have the knowledge base to know what causes illness and how to prevent its development because of their lack of understanding of it. Whereas someone who comes from higher education tends to have a higher functional status to engage in healthy and productive behavior in the future (Silfia, 2017).

The percentage of women from primary education was lower in the case and control group compared to women from higher education. However, the difference between basic education women in the case and control group is large enough so that the number of respondents who come from basic education in the case group is higher and affect the results of a positive VIA examination.

With a *p value* of 0.011 and an OR = 5.059, which means that the risk for the occurrence of a positive VIA examination in mothers of primary education is 5.059 times greater than for women from higher education.

This research was supported by the results of Tao's (2014) research in Beijing which concluded that there was an educational relationship with the results of a positive VIA examination with a *p value of* 0.0193 and an OR value of 7.89 which means that women who come from junior secondary education or lower risk to get positive VIA examination results compared to women from high school and undergraduate education.

**5. History of Cervical Cancer Screening**

One of the important things in preventing cervical cancer is screening using a cervical smear. Periodic screening programs are very important in identifying precancerous lesions to prevent the development of cancer becoming invasive (Kose, 2014). Not all HPV infections develop into precancerous or cervical cancer lesions, this infection can be treated 1-2 years of treatment if a woman is doing cervical cancer screening regularly (Natphopsuk, 2012).

In this study it was known that there was no correlation between cervical cancer screening history and VIA examination results with a p value of 0.381, this was due to the frequency distribution of women who had never performed cervical cancer screening in the case and control groups almost the same and so did the number or the percentage of women who have had cervical cancer screening also has almost the same amount.

This is in line with research conducted by Dao *et al* (2008) in El Savador which states that there is no relationship between the history of cervical cancer screening (Pap Smear) with the results of VIA examination with a *p value of* 0.48.

**Conclusion**

Result examination VIA positive in women of childbearing age in Puskesmas Desert in 2017 is most prevalent in the age group ≥35 years, parity <3, women who never used birth control hormonal, women from higher education and never screening cervical cancer. There is a relationship between age, hormonal family planning history and education with the results of IVA examination. However there is no relationship between parity and previous cervical cancer screening history with the results of IVA examination in the Sandstone Puskesmas Work Area in 2017.

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# The Impact of the Health Education about Self Concept and Self Defense towards Sexual Harassment PreventionAttitude and Knowledge to the Students of SD X PadangCity.

**Yulizawati[1], Henny Fitria[2], Siska Bradinda Putri Sudirman[3]**

[123]*Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonsia*

yulizawati@med.unand.ac.id[1]

**Abstract**

The rise of the sexual harassment phenomenon tends to overwrite such weak people, for instance children. This emerges out physical and psychological injuries. The reported incidents can besaidinthelowratebecauseofthelackofeducationofthe children to have a direct reaction when the sexual harassment attacksthem.

This research is aimed at finding out the impact of the health education about self-concept and self-defense towards sexual abuse prevention attitude and knowledge to the students of SD X in Padang City. This research is kind of *Pre Experiment* with *One Group Pretest Postest* design. The data were collected on March to April 2019. The populations of this research are 5th and 6th grade students. The amount of the samples are 41 subjects.

Thesamplesaretakenusing*TotalSampling*technique.Thedata processing is done with *Paired Sample T-Test* (p<0,05) using *software* SPSS 17. The results of this research showed that the average knowledge and attitude of the students before given the health education is 5,85 and after given the health education is 7,66. The analysis result of *Paired Samples T-Test* is p *value* (p=0,000).

There is an impact of health education about self-concept and self-defense towards sexual harassment prevention knowledge and attitude. It is expected that through this research, teachers and parents can recognize and understand the structure and the dangerous sexual harassment

**Keywords** : Elementary school, health education, self concept, self defense, sexual abuse of children

## INTRODUCTION

Sexual harrasment is every form of connotation behavior or leads to the unilateral sexual desire which is unwanted by the victims so that raises up negative reaction such as embarassment, anger,hatred,offensive,etcofthevictims of the harassment. (UNESCO,2013.

The sensitive phenomenon like sexual harassment tends to overwrite women and childrenin Indonesia and the world. UNICEF (United Nations International Children's Emergency Fund) which is a United Nations' organization for children revealed 1 of10 girls happened to be harassed (Kristanti, 2014).

According to the Yearly Notes (CATAHU) public abuse is improvingup to 3.528 cases including 2.670 sexual abuse cases, followed by 466 psychological abuse cases, 191 human trafficking cases and 3 migrant worker exploitation cases respectively as stated by the report of Woman National Commision (Komnas) in2018.

Based on the number of sexual harassment cases in West Sumatera, it mostly exploited children as the victims as much as 393 cases and Padang City ranked number one as much as 63 cases.

As revealed by Noviana (2015)that children are the vulnerable group thatcan be the victims of

sexual harassment because they have dependency on adults around them. This makes them have no strengthwhenthreatenedtouncoverwhat has happened to them including their parents.

Di In Indonesia, the sexual harassment prevention effort has been done by the Indonesian Children Protection Commision. They explain that they have created the ultimate movement that is inviting fast reaction team from village leveland involving society with the aim of knowing immediately the sexualin their place easily (National Children Protection Commision, 2014). WhileinPadangrightnowhasnothadthe media or model of particular instruction to instruct the first sexual harassment prevention. The expected intervention model is can improve assertive attitude and knowledge of the children in Padang City (Naherta,2015).

The sexual harassment education that is realized in the form of health education is really crucial. A health education is an effort to help people or a society group in increasing the knowledge and getting the attitude change as well as skills to get a betterlife (Tribowo and Mitha,2013).

The health education given are self-concept and self-defense. Self- concept deals with how a person recognizes himself. If the positive self- concept has grown since the first time, a kidtendstorecognizeandrespecthimself more so the sexual harassment willeasily be minimized (Handayani,2017).

In accordance with above, in preventing the sexual harassment of the children, beside introducing them to this concept, kids should be taught the self- defense as well. Hollander (2014) explained that the person participating on the self-defense training or having the knowledge about that is inclined to get less harassed or less sexual harassed as well as to have more confidence than a person who is not.

According to the report of West Sumatera High Prosecutor' s Office showed that there were 6 students from SD X in Padang became the victims of sexual harassment on September 2018 where 4 of them are girls and the rest are boys. They were harassed physically (touching and approaching the victims in the aim of negative behavior)

This made physical trauma such bruise and tear in the genitals as well as psychological trauma in which right now in the healing process. After the research done on February 2019 obtained that there is no any kind of subject teaching.

## METHODS

This research is kind of Pre Experiment with One Group Protest- Posttes design . The data are collectedfrom March to April 2019. The population on this research are the students from 5th and 6th grade. The number of samples in this research as much as 41 subjects. The samples are taken using Total Sampling technique. The date processing done with Paired Sample T-Test ($p<0,05$) using software SPSS 17.

## RESULTS

**Table 1. Respondent' s Age Distribution**

| Age | Frequey | Persentage (%) |
|---|---|---|
| 10 | 9 | 22 |
| 11 | 12 | 29 |
| 12 | 15 | 37 |
| 13 | 4 | 10 |
| 14 | 1 | 2 |
| Total | 41 | 100 |

According to the table 1, it can be seen the respondents' age distribution is from 10 to 14 years old and the respondents are mostly 12 years old as much as 15 respondents (37%).

**Table 1. Sex Distribution**

According to the table 2, it is knowntherespondentsaremostlyboysas much as 22 respondents (54%) and the rest are girls as much as 19 respondents (46%).

**Univariate Analysis**

**Table 3. The Knowledge Level Before and After Being Given Health Education**

| Pengetahuan Pencegahan Pelecehan Seksual | Kelompok Responden | | | |
|---|---|---|---|---|
| | *Pretest* | | *Posttest* | |
| | Frekuensi | Persentase (%) | Frekuensi | Persentase (%) |
| **Tinggi** | 6 | 15 | 23 | 56 |
| **Sedang** | 18 | 44 | 15 | 37 |
| **Rendah** | 17 | 42 | 3 | 7 |
| **Total** | 41 | 100 | 41 | 100 |

As stated in the table 3, we know thatbeforegiventhehealtheducation,the respondents are mostly in the medium level as much as 18 respondents. After given the health education, the respondents' knowledge is increasing as much as 23 respondents which are in the position of highknowledge.

**Table 4. The Attitude Level Beforeand After Being Given HealthEducation**

| Sikap Pencegahan Pelecehan Seksual | Kelompok Responden | | | |
|---|---|---|---|---|
| | *Pretest* | | *Posttest* | |
| | Frekuensi | Persentase (%) | Frekuensi | Persentase (%) |
| Positif | 13 | 32 | 33 | 80 |
| Negatif | 28 | 68 | 8 | 20 |
| **Total** | 41 | 100 | 41 | 100.0 |

In the table 4, it is known that the respondents' ability to react to prevent sexual harassment is inclined to be negative in amount of 28 respondentsand after given health education they tend to be positive in amount of 33 respondents.

**Bivariate Analysis**

**Table 5. The Result of Paired T-Test theLevelofKnowledgeandAttitudein Preventing SexualHarassment**

| Sex | Frequency | Percentage (%) |
|---|---|---|
| Girl | 19 | 46 |
| Boy | 22 | 54 |
| Total | 41 | 100 |

| Variabel | *Uji Paired Samples T-Test* | | | |
|---|---|---|---|---|
| | ***Mean*** | **SD** | ***ρ value*** | **n** |
| *Pretest* Pengetahuan | 5.85 | ±1.526 | 0.001 | 41 |
| *Posttest* Pengetahuan | 7.66 | ±1.442 | | |
| *Prestest* Sikap | 5.85 | ±1.606 | 0.001 | 41 |
| *Posttest* Sikap | 7.66 | ±1.477 | | |

According to the table 5, it shows that both variables above got statistic test results $\rho$ value = 0,001 ($\rho$<0,05). It canbe conluded that giving health education about self concept and self defense have impactedtotheknowledgeandattitudein preventing sexual harassment to the students of SD X in PadangCity.

**DISCUSSION**.

Unvariate analysis resulted the respondents' age frequency distribution shows that those participated in this research are from 5th and 6th grade that are 10 to 14 years old. The average.

One of the factors that influences the attitude is a personal experience. The attitude will easily be shaped if the personal experience involves emotional factor (Wawan, 2010). The low of the attitude in preventing sexual harassment is because that personal experience got neither education at all nor information aboutsexualharassmentpreventiontothe children.

After being given health education, the respondents got advanced knowledge due to self-concept and self-defense have been taught to them. So the respondents know and prepare themselves physically and psychologically to face the sexual harassment.Notoatmodjo(2007)saidthat the knowledge improvement obtained by having a learning process after doing a sensory perception to a particularobject.

The result of this research is compliance with the Notoadmodjo' s judgement in 2010 which stated that in shaping one' s attitude, the subject is firstly introduced to a stimulant that is a material that raises inner respond in the form of an attitude. Stimulant that interpretes a known object is fully conscious to occur a respond such a reaction to a stimulant or object. suatu program. Knowledge is the first step of a person to decide a demeanor. So the knowledge level is influential to an acceptance of aprogram.

The same case also impacts the children' s ability to improve their attitudeafterbeinggivenhealtheducation about self-concept and self-defense so they know and prepare themselves physically and psychologically to face the sexual harasmmentdoer.

The similar thought also stated by Notoadmodjo (2012) that an attitude is a hidden reaction from a person towards stimulant or object

As the result, the students who are given the health education about self concept and self defense can change the attitude due to the stimulant has influenced them before.

The stimulant given is health education which has been cleared away using any kind of media like powerpoint, videoplayer,modelandleaflet inorderto inform themeasily. The statistic test result using Paired Sample T-Test resulted Sigas much as 0.000 < 0,05. This rsult proves that self-concept and self-defense have influenced the students' knowledge in preventing sexual harassment in SD X Padang City. Health education is an importantthingtobegiventothechildren as early as possbile. It improves their insight because it genuinely happens because of some factors. One of the factors is a personal experience. Through experience, they can invest their insights andtheirsoft skillseasilytodeveloptheir ability to be determined which is part of manifestation of logical combination ethically and scientifically (Budiman and Agus,2013).

Mubarak (2007) added that elucidation is a method to increase the knowledge to shape an attitude of a person to a particular thing in which later can make it becomes a reaction. One of the attitude functions is insight function. Each individual has feeling to curious, to understand, to have more experience and

knowledge which are realized in daily life. So, the higher one' s education, the more positive attitude he can get

The triumph of the health education described through elucidation is not regardless from some factors influnce such explained by Notoadmodjo in2007,thatthetriumphofanelucidation can be an impact of some factors which are the readiness, the aim and the process ofelucidation..

According to the research thathas been done, the researcher found 3 criterions such as giving a chance to the respondentstoquestionthethingstheydo notunderstandandtheywereenthusiastic to hear the elucidation thoroughly. The researcher also emphasizes the important things that the respondents should remember regarding the materialsgiven.

## CONCLUSION

Sexual harassment prevention knowledge and attitude after being given health education about self concept and selfdefensearemostlyinthemediumand maximum level and their attitude has beeninclinedtothepositivitywhichsigns the children have understood howto prevent sexual harassment and there is an impact of health education about self concept and self defense towards sexual harassment prevention knowledge and attitude to the students of SD X Padang City.

## GRATITUDE

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# THE RELATIONSHIP BETWEEN ADOLESCENT GIRLS' KNOWLEDGE ABOUT REPRODUCTIVE HEALTH AND IDEAL MARRIAGE AGE WITH ATTITUDES TOWARD IDEAL MARRIAGE AGE IN MAN 3 PADANG

**Firdawati[1], Lusiana El Sinta Bustami[2], Siti Hanisa Khaira[3]**

*[1]Departement of Public Health, FK UNAND, Jln. Perintis Kemerdekaan no. 94, Padang, Indonesia*
*[23]Bachelorof Midwifery Program FK UNAND, Jln. Niaga no. 56 Padang, Indonesia*
firdawati@med.unand.ac.id[1]

**Abstract**

Marriage at the ideal age stillnot become a publicconcern. Its proven by theprevalence of the incidence of early marriage in Indonesia only down1% from 2013to 2015. The campaign to maturing the marriage age continues to be echoed because various impacts and risks will be more concerning women. prevention with good knowledge so as to form attitudes and behaviors that support the maturity of the marriage age. The aim of this research is to determine the relationship between adolescent girls' knowledge about reproductive health and ideal marriage age with attitudes toward ideal marriage age at MAN 3 Padang. Type of research is quantitative research with cross sectional designusing Chi-Square Analysis. Responden were X grade and XI grade schoolgirls in MAN 3 Padang.The results showed the highest reproductive health knowledge at the middle level (46%) but more than half of the respondents had knowledge of the ideal marriage age at a high level (61.1%) and attitudes that supported the ideal marriage age (71.1%). there is a relationship between knowledge of reproductive health (p = 0.001) and knowledge about ideal marriage age (p = 0,001) with attitudes toward ideal marriage age at students of MAN 3 Padang. This research is expected to be an input for all authorities in order to pay more attention and contribute to the success of marriage age maturity

**Keywords** : Knowledge, Attitude, Reproductive Health, Ideal Marriage age, girls adolescence

## INTRODUCTION

Marriage is a new stage in the life of someone who needs consideration and planning that is intended for the prospective husband and wife to prepare household ark assistance. Building a household requires great responsibility according to Papalia et al (2008) marriage is a stage that will be entered by individuals who have grown up.

An ideal marriage is a marriage that is carried out in the best phase of a person to settle down. The phase is seen as a whole in terms of biological, physical and spiritual, psychological, religious, social and economic (Ministry of Religion, 2009). The ideal age for marriage for women of at least 21 years for men of at least 25 years (BKKBN, 2017).

The UNICEF global database (2018) records 12 million girls having early marriages every year. This risk will double in poor families (USAID, 2015). In Indonesia 1 in 4 girls marries before turning 18 (BPS, 2017). Early marriage rates fell by 1% from 2013 (24%) to 2015 (23%).

The definition of early marriage is a marriage that is carried out through civil, religious or customary law, and with or without official registration and approval in which one or both brides are under the age of 18 years (BPS, 2017). According to Law No. 35 of 2014 Article 1 Paragraph 1, Ages 18 and under are the age range of children. Although the age of 18 years is not included in the age range of children, it does not mean that the age set as the ideal age for marriage (WHO, 2013).

1 of 1974. In Article 7 Paragraph 1 it is agreed that marriage can be carried out for men who are questioned for 19 years and women who have been questioned have supported 16 years. This legal basis is contrary to the marriage age maturity program that continues to be echoed by the BKKBN.

Many interrelated factors become drivers of early age as well as education and finance. Data from the Ministry of Health (2015) only 7.2% of young women have knowledge of access to financial information service locations and only 35.3% of young women who have information about being able to have one sexual intercourse. Access to incomplete information about sources not related to adolescents has limited insight into health and early marriage (Ministry of Health, 2015). Susenas data in 2012, 40.1% of married women aged <18 years had unsuitable housing conditions, 36.1% with conditions that were prone to habitable housing (BPS, 2017). Families who do not have the ability to provide proper education to get support in the family will prefer financial security after marrying sheep (Djamilah and Kartikawati, 2014).

This early marriage is the reason for the cessation of a child's education. Susenas data in 2015, as many as 97.2% of girls who married at the age of <18 years had dropped out of school and women who married at the age of> 18 years, as many as 93.31% decided to quit school. The decision to choose the period of education that led to the low achievement of the last level of education. Other social impacts that can arise from early marriage are divorce, infidelity and domestic violence (Djamilah and Kartikawati, 2014). Life divorce rates reached 4.53% of cases in 2015 in women who were married before the age of 18 where the percentage exceeds women who were married at a more mature age (BPS, 2017)

Reproductive health is holistic which is not only physically healthy and reproductive functions but also healthy, and is full of all aspects related to reproductive systems, functions and processes (MOH, 2015). The function of the reproductive organs of an immature child can be brought into a fatal condition and maintained by the soul. Manuaba (1998) explains that pregnancy is too young (<20 years) based on the 4T factor high risk pregnancy. The main cause of death of girls aged 15-19 years in the world is due to pregnancy and childbirth. (BPS, 2016). Early marriage is the right of children. Regarding girls who are not ready to discuss their household, physiological and psychological problems, attaching them to economic and social issues leads to subordination within the family or community (BPS, 2017).

In the Province of West Sumatra in 2015 there were 315,958 women with the age of first marriage under 21 years. The city of Padang ranks fifth highest with 24,647 people (BKKBN, 2015). Data on the number of pregnant women in the city of Padang in 2015-2017 in the age group <18 years there are 214 people, and the age group 18-20 years there are 1545 people. The highest area is in Koto Tangah Subdistrict, in the age group <18 years as many as 51 people and the age group 18-20 years as many as 375 people

The results of an initial survey conducted by researchers at MAN 3 Padang located in Koto Tangah sub-district, found 1 case of a student who dropped out of school due to marriage and 1 case of a married student who graduated from high school in 2018. Based on the above background, the researcher is interested in conducting research with the title "Relationship between Adolescent Girls' Knowledge of Reproductive Health and Ideal Marriage Age with Attitudes Towards Ideal Marriage Age at MAN 3 Padang".

## II. Method

This study uses a cross sectional design. The population in this study were all class X and XI students in the 2018-2019 school year. The sample consisted of 90 respondents. Sampling is done by simple random sampling technique. Univariate and bivariate data analysis used the Chi Square test.

## III. Result

### Univariat Analysis

### 3.1. Frequency distribution of respondent characteristics

| Characteristics | f (n=90) | % |
|---|---|---|
| **Department** | | |
| IPA | 41 | 45.6 |
| IPS | 36 | 40 |
| PK | 13 | 14 |
| **Age** | | |
| Middle Teen | 39 | 43,3 |
| Late Teen | 51 | 56,7 |
| **Number of Siblings** | | |
| ≤ 2 | 23 | 25,6 |
| > 2 | 67 | 74,4 |
| **Place of residence** | | |
| Own/cost/lease | 4 | 4.4 |
| With parents | 82 | 91.1 |
| With Grandma/sister | 4 | 4.4 |

Based on the table above, it was found that the frequency distribution of the majority of respondent majors came from the natural science majors (45.6%). More than half of respondents (56.7%) are in the late adolescence age range, 17-19 years. 74.4% of respondents have siblings of more than 2 people in the family. The majority of respondents, 91.1%, lived with parents.

### 3.2.Reproductive health knowledge

| Reproductive health knowledge | f | % |
|---|---|---|
| Low | 10 | 11,1 |
| Intermediate | 42 | 46,7 |
| High | 38 | 42,2 |
| **Total** | **90** | **100** |

The table above shows the distribution of reproductive health knowledge in MAN 3 Padang students, as many as 46.7% have moderate reproductive health knowledge.

### 3.3 Ideal Marital Age knowledge

| Ideal Marital Age knowledge | f | % |
|---|---|---|
| Low | 13 | 14,4 |
| Intermediate | 22 | 24,4 |
| High | 55 | 61,1 |
| **Total** | **90** | **100** |

The above table shows that more than half of the teenage girls at MAN 3 Padang have high knowledge of the ideal marriage age of 55 people (61.1%).

**3.4 Attitude towards Ideal marital age**

| Attitude towards Ideal marital age | f | % |
|---|---|---|
| Not Support | 26 | 28,9 |
| Support | 64 | 71,1 |
| **Total** | **90** | **100** |

The table above shows that of the total respondents, 90 people, 64 people (71.1%) have attitudes that support the ideal marriage age.

**Bivariat Analysis**

**3.5 Relationship between knowledge of reproductive health with attitude towards Ideal marital age**

respondents who did not support ideal marriage age were more in young women with low reproductive health knowledge that is 80% compared to young women with moderate (21.4%) and high reproductive health knowledge (23.7%). The results of statistical tests using the Chi-Square test showed that there was a significant relationship between reproductive health knowledge and attitudes towards ideal marriage age.

**3.6 Relationship between Knowledge of Ideal Marriage Age and Attitudes Towards Ideal Marriage Age**

respondents with supportive attitudes toward ideal marriage age have the most knowledge about the ideal ideal marriage age with a percentage of 87.3% compared to respondents with moderate knowledge (50%) and low (38.5%). Statistical test results using the Chi-Square test obtained a p-value of 0.001 (<0.05) so that there is a significant relationship between knowledge of the ideal marriage age to attitudes towards ideal marriage age.

**Tabel 3.5 Relationship between knowledge of reproductive health with attitude towards Ideal marital age**

| Knowledge of reproductive health | Attitude towards Ideal marital age | | | | | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Unsupportive attitude | | Supportive attitude | | Total | | |
| | f | % | f | % | f | % | |
| Low | 8 | 80 | 2 | 20 | 10 | 100 | |
| Intermediate | 9 | 21,4 | 33 | 78,6 | 42 | 100 | 0,001 |
| High | 9 | 23,7 | 29 | 76,3 | 38 | 100 | |
| **Total** | 64 | 28,9 | 26 | 71,1 | 90 | 100 | |

**Tabel 3.6Relationship between knowledge of Ideal marital age with attitude towards Ideal marital age**

| knowledge of Ideal marital age | Attitude towards Ideal marital age | | | | | | *p- value* |
|---|---|---|---|---|---|---|---|
| | Unsupportive attitude | | Supportive attitude | | Total | | |
| | f | % | f | % | f | % | |
| Low | 8 | 61.5 | 5 | 38,5 | 13 | 100 | |
| Intermediate | 11 | 50 | 11 | 50 | 22 | 100 | 0,001 |
| High | 7 | 12.7 | 48 | 87,3 | 55 | 100 | |
| **Total** | 26 | 28,9 | 64 | 71,1 | 90 | 100 | |

**IV. Discussion**

Respondents who were sampled in this study were class X and XI students who averaged between the ages of 16-18 years as many as 56.7% of respondents were in the late adolescent age group (17-19 years). The age group in the sample taken has a risk because according to SUSENAS data in 2015 the percentage of women aged 20-24 years with age of first marriage under the age of 18 years was 22.82%, under 16 years amounted to 3.54% and under 15 years 1 , 12% (BPS, 2017). Based on the characteristics of respondents it was found that as many as 74.4% had more than 2 siblings in their family. In general, respondents lived with parents, namely 91.1%.

Teenagers are an important segment in the stages of human development into an adult human where during an adolescence of an individual through a process of physical, social and psychological maturity (Sarwono, 2016). In adolescence, a person starts to think abstractly, develops fantasies about sexual activity, has feelings of affection that want to be poured out on the opposite sex (Hurlock, 2011). Overall it can be concluded that adolescents are going through the process of searching for identity to reach maturity

**Reproductive health knowledge**

knowledge of reproductive health in adolescent girls at MAN 3 Padang is at the moderate level of knowledge that is equal to 46.7%. Analysis of the questionnaire questions found that the questions which were at least mastered by respondents were differences in the characteristics of primary and secondary sex in young women as seen from 82.2% of respondents answered the question incorrectly. Furthermore questions about the possibility of pregnancy that can occur only with one sexual intercourse as many as 46.7% who answered incorrectly. Not much different from the results of the IDHS (2017) as many as 51% of young women who know that women can get pregnant with one sexual intercourse.

Research conducted by Nika Susanti (2013) at Darussholah Banyuwangi SMAN showed different results where 59% of respondents had low reproductive health knowledge. Many factors can affect a person's level of knowledge such as level of education, interests, economic status, social, cultural, environmental, and information sources (Notoatmodjo, 2012) which as a whole provide a different experience for each individual.

The sample in this study had different majors backgrounds as many as 45.6% came from natural science majors, 40% majored in social studies and 14% majored in PK. This can be one of the factors causing differences in the level of reproductive health knowledge among respondents due to differences in exposure to lessons and information related to reproductive health. In a study by Mentari et al (2015) at SMAN 1 Temanggung, there were statistically significant differences in reproductive health knowledge

between students majoring in Natural Sciences and Social Sciences. The difference in the level of knowledge can be caused by differences in sensing intensity in paying attention and perception of the object being observed (Notoatmodjo, 2012) in this case related to reproductive health. Mairo and Islamic research (2014) in girls in boarding schools found 89% of adolescents with reproductive health problems with low knowledge of reproductive health.

Adolescents have a high curiosity about sexuality (Gunawan, 2011) and the tendency of teenagers who are close to peers can cause adolescents to seek information from sources that are less well directed. Results of the IDHS adolescent reproductive health (2017) which presents as many as 62% of young women discuss reproductive health with peers. Schools must provide supporting facilities and initiate youth through the PIK-R program to ensure that each student gets information from a valid source and ensures that students have equitable knowledge even though they have different backgrounds in their majors. True knowledge of reproductive health is important for all students to have as a basis for behavior and behavior related to reproductive health

**Ideal Marital Age Knowledge**

Knowledge about ideal marriage age is very important for adolescents not only as an appeal to delay marriage to the ideal age but also various efforts in the context of physical, mental and economic preparation. The effort to postpone marriage is also a prevention of the impact of an unmarried marriage which can have fatal effects on a person's life so that adolescents can raise awareness to make plans and prepare for family life (Dinkes, 2018). In this study it was found that more than half of respondents had a high level of knowledge (61.1%). Questions in the questionnaire that were at least mastered by respondents were about unwanted pregnancies that could occur in early marriage perpetrators as many as 63.3% of respondents answered incorrectly, followed by questions about the risk of complications will be smaller in pregnancies aged> 20 years there were 60% respondents answered wrongly.

The results of this study are similar to the study by Wijaya and Sajidah (2015), the results of knowledge of young women at a good level of 65.22%. Similar results were found in the research of Taufik, Sutiani and Hernawan in 2018, as many as 58.3% of adolescents had good knowledge and 92.1% of those who were well-informed had married preferences at the ideal age.

A good level of knowledge on this variable can be caused by the education that has been passed by the respondent because according to Sumbulah (2012) the high level of education will affect one's ability to absorb information. The better teenagers in absorbing information will certainly have an impact on increasing knowledge which will later become a source of reference for teenagers in decision making (Diniyati, 2017). Factors that influence one's knowledge are also often found to be factors causing early marriage (Arimurti and Nurmala, 2017). Erulkar (2013) states that the possibility of early marriage will increase nine-fold in uneducated adolescents.

Analysis of the question points shows that more than half of respondents mistakenly asked questions about the effects of marriage are not ideal. This can be caused by a lack of socialization, an environment that does not yet have the awareness of the dangers awaiting early-age marriages, or also a lack of curiosity about individuals about the risk of early marital risk (Oktavia., Et al, 2018). Knowledge about the ideal marriage age is not only aimed at introducing an ideal age for holding a marriage but also giving understanding and awareness about the importance of considering self-maturity before a marriage takes place. Knowledge about the various implications that arise if a marriage is not well planned is expected to be the basis for adolescent consideration before making decisions and be a controller for adolescents themselves to avoid risky sexual behavior that can be a driver of early marriage (Oktavia et al., 2018).

**Attitude Towards Ideal Marital Age**

The majority of female teenagers who were respondents in this study had the attitude of supporting an ideal marriage age of 71%. Questionnaire analysis on positive statements regarding future planning and preparing for family life can be done since I was a teenager as many as 45.6% stated they did not agree. Furthermore, the negative statement about the presumption of marriage in adolescents is the best way to prevent risky sexual behavior as much as 43.3% of respondents answered agree.

Susanti's research (2013) also found positive student attitudes toward adult marriage age as much as 52%. In the study of Wijaya and Sajidah (2015), a balanced percentage was obtained, namely 50:50 in an attitude of support and not support early marriage. Attitude is the result of self-evaluation which then forms the point of view, feelings and impressions of something that shapes behavioral tendencies (Priyoto, 2014). How respondents respond to the ideal marriage age is formed from the learning outcomes that have been passed both formal and informal learning. 91.1% of respondents in this study living with parents allowed respondents to get good direction and supervision at home. Parents are the closest people who have emotional ties with respondents. This can be a driver of good attitude because according to Notoatmodjo (2012) beliefs and emotional involvement play an important and deep role in shaping one's attitude.

Someone's assessment of the ideal marriage age can be different from each other because each individual has different characteristics and experiences. Personal experience does not always mean having experienced or gone through a marriage but can be in the form of observations or social interactions of individuals on matters relating to early marriage. Notoatmodjo (2012) explains that attitude is a closed reaction that has not yet reached the action phase. Even so, attitude is based on belief so that it becomes a strong driver of action taken by someone later.

**Relationship between Young Women Knowledge about Reproductive Health and Attitudes Towards Ideal Marriage Age**

The results of this study find a relationship between the knowledge of adolescent girls about reproductive health with attitudes toward ideal marriage age. This can be seen from the results of respondents' statistical data with the attitude of supporting the ideal age of marriage at the highest level of having reproductive health knowledge at a moderate level (78.6%). Hypothesis testing using Shi Square has a significant relationship between two variables with a value of $p = 0.001 < 0.05$.

This study is in line with the results of research by Wijaya and Sajidah (2015) at SMAN 1 Lingsar, West Lombok, there is a close relationship between the two variables of knowledge and attitudes about early marriage. Adolescents with good knowledge of reproductive health can recognize changes in their bodies so that they know what they need for reproductive health, including having a mindset for marital preparedness. Research Oktarina et al (2016) at SMAN 1 Sukamara, Central Kalimantan found that reproductive health education by peers has an influence on adolescent attitudes. After being given reproductive health education, there was an increase in a positive attitude in the prevention of premarital sex, which initially had an average of 67.6, increasing to 75 after being given an intervention.

Knowledge is one of the three important components of the formation of attitudes, namely the cognitive component related to beliefs and ways of looking at things, the affective component has emotional involvement where the impact is deeper on the attitudes shown by individuals to an object, and the conative component leads to how to react or tendencies behave (Azwar, 2012). Azwar (2013) also explains that the attitude of each person can be different in assessing the same object because there are

factors that influence a person's attitude such as experience, others who are considered important, culture, mass media information, educational institutions, religious institutions and emotional responses.

Different results were found in a study by Susanti (2013) which showed no relationship between reproductive health knowledge and attitudes towards maturing marriage age. In that study, as many as 56% of low-knowledge adolescents had a positive attitude towards maturing of marriage age. Knowledge of good reproductive health can bring a positive attitude towards the ideal marriage age. Conversely, adolescents with poor knowledge do not understand the effects of marriage not ideal for reproductive health. But it is also possible though teenagers who have good knowledge will have a positive attitude because the attitude is not only formed from the knowledge factor alone.

**Relationship of Young Women Knowledge About Ideal Marriage Age with Attitudes Towards Ideal Marriage Age**

This study found a significant relationship between the level of knowledge of the ideal marriage age and the attitude towards ideal marriage age with a value of $p = 0.001$ ($<0.05$). The results of this study the attitude of supporting the ideal marriage age majority of 87.3% owned by respondents with a high level of knowledge compared to respondents with moderate knowledge (50%) and low (38.5%).

Relevant results found in the research of Taufik et al., 2016 in Sungai Raya Subdistrict, Kubu Raya Regency, were 92.1% of respondents with a high level of knowledge of maturing marriage having an ideal marriage age preference. This indicates that high knowledge makes marriage age standards more ideal and has a low intention towards early marriage. Then a study by Lestari et al (2014) found similar results that there was a significant relationship between adolescent knowledge on maturity of marriage age with the intention to marry young ($p = 0.017$). Knowledge is an important factor for someone in planning (Desmita, 2006). Teenagers can already have a future plan that they want to go through. If adolescents have been provided with good knowledge and have known the negative effects of marriages that are not ideal, adolescents will have attitudes that tend to marriages at an ideal age

Humans carry out the process of observing objects through the five senses, providing judgments, then knowledge is formed that forms the form of one's actions (Notoatmodjo, 2012). The theory is in accordance with the results of Salamah's research (2016) which found that education and knowledge factors influence the incidence of early marriage in Pulokulon District, Grobogan Regency. Value of OR = 12.66. shows the risk of early marriage reaching 12.66 times in women with insufficient knowledge. The results of a qualitative study by Djamilah and Kartikawati (2014) found that child marriages are one of the factors that is ignorance of the impact of early marriages so that the perpetrators do not have any awareness of health or long-term risks caused by such early marriages.

**Conclusion**

1. Most respondents are from the Natural Sciences department, more than half are in the late adolescent group, most respondents have more than 2 siblings, the majority live with parents.
2. The level of knowledge of young women regarding reproductive health is most dominant at a moderate level.
3. The level of knowledge of young women regarding the ideal age of marriage is most dominant at a high level.
4. Attitudes of young women towards the ideal age of marriage the most dominant is the attitude of supporting the ideal marriage age
5. There is a relationship between reproductive health knowledge and attitudes towards ideal marriage age.

6. There is a relationship between knowledge of the ideal marriage age with attitudes towards the ideal marriage age

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# Relationship Between Knowledge Of Mother and Familly Support With The Selection Of Chilbirth Helper In Work Area Of Pintu Padang Health Center, Pasaman

**Miranie Safaringga[1] Yuniar Lestari, [2], Suci Cahyati M [3]**

*[13]Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
*[2] Departmen of Public Health and Community Medicine, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
miraniesafaringga@med.unand.ac.id[1]

**Abstract**

Childbirth by skilled health personnel is one of the efforts to reduce maternal and infant mortality. Coverage of births attended by non-health personnel at health centers Pasaman Pintu Padang by 11% in 2018. The aim of this study to determine the relationship of mother's knowledge and support of families with birth attendants election in Puskesmas Pintu Padang Pasaman. Quantitative research with cross sectional design conducted in Puskesmas Pintu Padang Pasaman in January 2018 to July 2019. Respondents are maternal in 2018 with a sample of 40 respondents. The research instrument used was a questionnaire. Data analysis of univariate and bivariate using Chi-square p value ≤ 0.05. Results showed 30% of women choose non-health personnel as birth attendants, 47.5% of women had less knowledge, and 42.5% of mothers lacking family support on election birth attendant. The results of the analysis of bivariate relationship with the birth attendant election mother knowledge (p = 0.009) and family support (p = 0.018). There is a relationship between the mother's knowledge and support of families with birth attendants election in Puskesmas Pintu Padang District

**Keywords** : Helper Labor, Knowledge, Family Support

## INTRODUCTION

Childbirth is a natural process and not a disease, but it is necessary because the conditions under which normal can become abnormal or pathological (Purwandari, 2008). Based on the program of Clean and Healthy Lifestyle (PHBs) in Indonesia, there are indicators that should be considered by every household in order to represent and reflect the overall behavior of clean and healthy namely births attended by skilled health personnel (MoH RI, 2013). According to the Indonesian Ministry of Health (2018) each delivery process must also be carried out in health facilities and assisted by trained health personnel.

In some areas there are still many choose birth attendants with non-health personnel such as TBAs often cause adverse effects for mother and baby as neonatal tetanus and infection because of childbirth assistance is given inadequate (Saifuddin, 2014). Low coverage births attended by health personnel be one of the factors associated with mortality in mothers and babies (MoH RI, 2014).

In 2013 in the village of Santol Jepara, there were 21 mothers who were helped by non-medical personnel (TBA). Where the labor is obtained 18 cases of umbilical cord infection and neonatal tetanus. Cause mothers choose non-health personnel as birth attendants because of limited knowledge, fear of holding / carrying babies and follow the suggestions and requests of parents and family (Kurnia, 2013).

Based on the Indonesia Health Profile 2018, births attended by health personnel in Indonesia has been complied Strategic Plan targets (79%) is as much as 83.67%, but still there are 17 provinces (50%) who do not meet the target and not all of those deliveries housed in health care facilities and assisted by health workers, so that there is a gap far enough between the highest provincial Jakarta (114.42%) and lowest province of Maluku (30.65%). Deliveries with health professionals in West Sumatra has reached 80.37% of the target of 79%, but still a lot of births attended by non-medical personnel, such as TBA. One of them Pasaman with coverage childbirth assistance with health workers still 78% of the target of 79% (West Sumatra Health Office, 2018).

Pasaman has 16 health centers, one health center Pintu Padang which is a region with a helper lowest delivery by health personnel. By 2016 deliveries in the health center working area into a region with a helper delivery by health personnel lowest at 59% of the target of 85% (DHO Pasaman, 2017). In 2017, an increase that is 78% of the 95% target (DHO Pasaman, 2018). In the year 2018, increased to 89% of the target of 100% (DHO Pasaman Year, 2019). It can be concluded that the percentage of births attended by health personnel in Puskesmas Pintu Padang Pasaman has increased every year, but it remained below the set target.

Based on research Nurhapipa (2015) in Kampar, Riau there are several factors related to the election of birth attendants is a factor of knowledge, attitudes, social, cultural, economic status, access / proximity to health services and family support. The study concluded that there is a relationship of family support in choosing a birth attendant. Family support has an important role in choosing a helper, whether during pregnancy, childbirth or post-partum. This is associated with a mother's young age so that the ability to choose or make their own decisions is still low. If you follow the advice of their parents or family, then the rest of the family responsible.

Research conducted by Meylanie (2010), a mother who has a good knowledge will make the mother feel more confident and have the insight and ability to make decisions for themselves and their families as a helper in choosing who labor. Another study by Simanjuntak (2012) in Puskesmas Sipahutar, North Sumatra, shows that there is correlation between knowledge ($p = 0.005$) and family support ($p = 0.005$) with the election of birth attendants. Mothers who have a high knowledge choose midwives as birth and mother's helper knowledgeable herbalists as an auxiliary low chose her labor. Total shaman who is still active in the field Doors Puskesmas many as 15 people (each ellipse has a minimum of 1 TBA).

Based on the description above researchers interested in conducting research on the relationship of mother's knowledge and support of families with birth attendant election at Puskesmas Pintu Padang Pasaman.

## METHODE

This research is an analytic with cross-sectional design. Data collection was conducted in May and June 2019. The population in this study is maternal. Sampling was done by simple random sampling technique. Data processing was performed with Chi-square test ($p < 0.05$) using SPSS software 16. In the process of data collection researchers supported by 3 enumerators have been trained to provide appropriate questions to fill out the questionnaire.

## RESULTS

**Table 1. Distribution Characteristics of Respondents**

| characteristics of respondents | Frequency (f) | Percentage (%) |
|---|---|---|
| Age | | |
| <20 years | 5 | 12.5 |
| 21-35 years | 31 | 77.5 |
| > 35 years | 4 | 10 |
| | | |
| Parity | | |
| 1 | 14 | 35 |
| > 1 | 26 | 65 |

that most respondents are aged 20-35 years (77.5%) and the parity is more than 1 (65%).

**Analysis Univariate**

**Table 2. Election Helper Distribution Delivery**

| **Delivery Helper Selection** | **Frequency** | **Percentage (%)** |
|---|---|---|
| Non Health Workers | 12 | 30 |
| Health workers | 28 | 70 |
| **Total** | **40** | **100** |

Based on 2 table above shows that a small proportion of respondents (30%) chose non-health workers as birth attendants.

Tabel 3. Mother's Knowledge

| **Knowledge** | **Frequency** | **Percentage (%)** |
|---|---|---|
| Less | 19 | 47,5 |
| Good | 21 | 52,5 |
| **Total** | **40** | **100** |

Based on Table 3 above shows that a small percentage of respondents (47.5%) coined the less knowledge about birth attendant election.

Tabel 4. Familly Support

| **Family support** | **Frequency** | **Percentage (%)** |
|---|---|---|
| Less Support | 17 | 42.5 |
| Support | 23 | 57.5 |
| **Total** | **40** | **100** |

Based on table 4 above shows that a small proportion of respondents (4,5%) lacked familly support regarding the selection of birth attendants

**Bivariate analysis**

Table 5. Relationship of Knowledge Mother With Delivery Helper Selection

| Knowledge | Delivery Helper selection | | | | Total | | p-value | OR(95% CI) |
|---|---|---|---|---|---|---|---|---|
| | Non Helath Workers | | Health workers | | | | | |
| | f | % | f | % | f | % | | |
| Less | 10 | 52,6% | 9 | 47,4% | 19 | 100 | 0,009 | 10,5 (1,9-58,5) |
| Good | 2 | 9,5% | 19 | 90,5% | 21 | 100 | | |
| Total | 12 | | 28 | 70 | 40 | 100 | | |

Based on Table 5 shows that the percentage of women who chose non-health workers is greater in women who have less knowledge (52.6%) compared with women who had a good knowledge (9.5%). Results of statistical test by using Chi-Square test was obtained p = 0.009, meaning that there is a relationship between knowledge of mothers with a birth attendant election at Puskesmas Pintu Padang Pasaman. The results of the analysis of Odd Ratio (OR) obtained was 10.556 with a confidence interval is 1.904 to 58.528 means that respondents who have less knowledge likely 10x choose non-health workers as helpers labor.

**Table 6. Relationship with the Family Support Delivery Helper Selection**

| Family Support | Delivery Helper selection | | | | Total | | p-value | OR(95% CI) |
|---|---|---|---|---|---|---|---|---|
| | Non Helath Workers | | Health workers | | | | | |
| | f | % | F | % | f | % | | |
| Less Support | 9 | 52,9% | 8 | 47,1% | 17 | 100 | 0,009 | 7,5 (1,6-36)) |
| Support | 3 | 13% | 20 | 87% | 23 | 100 | | |
| Total | 12 | | 28 | 70 | 40 | 100 | | |

Based on Table 6 shows that the percentage of women who chose non-health workers is greater in women who lack family support (52.9%) compared with women who received family support (13%). Results of statistical test by using Chi-Square test was obtained p = 0.018, meaning that there is a relationship between family support with the selection of birth attendants in Puskesmas Pintu Padang Pasaman. The result of analysis Odd Ratio (OR) were 7,5 with Confidence Interval , which is 1,604-35,075, which

means that mothers who lack familly support have a 7,5 chance to choose non-health workers as birth attendants.

**DISCUSSION**.

**Univariate analysis**

The results showed that the small proportion of respondents (30%) chose the non-health personnel as birth attendants while the rest (70%) chose as an auxiliary health worker labor. According to research conducted by Juliwanto 2009 in Aceh Tenggara, there are several factors related to the election of birth attendants is the level of knowledge, attitudes, access to health services and family support, where the knowledge and support of the family is the most dominant factor influencing the selection of birth attendant.

These findings are consistent with research conducted by Hydra (2017) at Pasir Putih Health Center Muna that show less than half of the respondents chose non-health personnel as birth attendants (36.4%) and the rest chose health workers as birth attendants (63.3% ). The results of this study are also consistent with studies Mutmaina (2018) showed that 29.8% of women choose non-health personnel as birth attendants and 70.2% chose health personnel.

This study is in line with research Donsu (2014) in West Modayag which showed that respondents who lack family support (42%) less compared with respondents who have received family support (52.5%). Other studies on public Tribe Madura indicates that respondents the family support that is 74.5% more and less family support that is 25.5% (Abrori, 2017).

Based on this research, the mother believes the family never helped a mother looking for information about health workers as birth attendants, although the family has an important role in choosing a birth attendant, one of which provide information support to the mother. Families who care about the condition of pregnancy and childbirth the mother will support and advise to always entrust more competent as health workers, because if something bad happens to the mother, the whole family, especially the parents will take responsibility. According Setiadi (2008), family support provided by family that is information, emotional, instrumental and awards that can be shown through attitudes, actions and acceptance of other family members so that mothers feel more cared for. Other than that,

**Bivariate analysis**

Based on the results of a study of 40 women giving birth in 2018 in Puskesmas Padang Pasaman Doors can be seen that the percentage of mothers who choose non-medical health workers is greater in women who have less knowledge (52.8%). Results of statistical test by using Chi-Square test was obtained p = 0.009, meaning that there is a relationship between knowledge of mothers with a birth attendant election at Puskesmas Pintu Padang Pasaman. The results of the analysis of Odd Ratio (OR) obtained was 10.556 with a confidence interval is 1.904 to 58.528 means that respondents who have less knowledge likely 10x choose non-health workers as helpers labor.

Studies conducted in Puskesmas Head of Teluk Keramat shows that there is a relationship of knowledge to the selection birth attendants with p = 0.000. Based on the results of the analysis, the value of Odd Ratio (OR) was 7.13, which means that respondents who have less knowledge will likely 7,13-click to select non-health workers as helpers labor.

This study is not in line with Yuliastuti study (2015) that there is no relation between knowledge with election planning birth attendants. It disebakan because of the level of confidence of respondents to non-health personnel such as village shaman is still strong because it considers who helped birth the first, then

the next labor in favor again by these people and decision-making are usually relatives (parents / husband / in-laws).

Based on the results that women who lack family support many choose non-health workers as helpers childbirth (52.5%), whereas mothers who support more families choose health workers as helpers birth (87%). Statistical test result with Chi-square test p value 0.018, which means that there is a relationship between family support with the selection of birth attendants in Puskesmas Pintu Padang Pasaman. The results of the analysis of Odd Ratio (OR) obtained was 7.5 with a confidence interval is 1.604 to 35.075, which means that mothers are less likely to get family support 7.5 times likely to choose non-health personnel as birth attendants.

This study is in line with Sufiawati study (2012) found that mothers prefer family support maternity health providers (56.8%) as an auxiliary labor. This means that family support is given more dominant than the decision of the mother's own self to choose helper labor.

Another study by Abrori (2017) on the Dayak community shows that there is a relationship with the selection of family support birth attendants. The results of the analysis obtained by value Odd Ratio (OR) is 1,560, with a value Confidence Interval (CI) of 95% that is 1.273 to 1.912 where mothers with supportive family support have a risk 1.6 times decided on the helper birth to non-health personnel than mothers do not get the support of the family.

Based on years of research in PHC Cibadak mother mentions that decision in choosing a birth attendant is very dependent on the family. In women who are advised by the family to choose a health worker as birth attendants, then the mother would consider to be delivered by health professionals. As well as families who advise the mother to give birth to non-health personnel such as TBA, then the mother will also consider to be delivered by non-health workers (Husnul, 2017).

## CONCLUSION

A small portion of respondents have less knowledge of the election birth attendants, a small portion of respondents lack of support from the family of the election birth attendants and mothers small proportion of respondents choosing non-health personnel as birth attendants. In bivariate analysis also found a relationship between knowledge of mothers with birth attendants election and the relationship between family support with the selection of birth attendants in Puskesmas Pintu Padang Pasaman.

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# The Difference of Menopausal Age Between Depomedroxy Progesterone (DMPA) Injection Acceptors and Intrauterine Devices (IUD) Acceptors in Lubuk Buaya Public Health Centre Area.

**Desmiwarti[1], Yulizawati[2], Tiara Paradisa[3]**

[1] *Departmen Obstetric and Gynecology, RSUP Dr. M Djamil, Padang, Indonesia*

[2] *Midwifery Bachelor Program of Medicine Faculty UNAND, Jln. Niaga no. 56 Kota Padang, 25127, Indonesia*

[3] *Midwifery Bachelor Program of Medicine Faculty UNAND, Jln. Niaga no. 56 Kota Padang,, 25127, Indonesia*

desmiwarti@gmail.com[1]

**Abstract**

*Menopause* is the point in time when menstrual cyclespermanently cease after having amenorrhea for 12 consecutive months which does not occur due to pathological conditions. There are many factors that affect women menopausal age, one of them is contraceptive use history. Contraception is divided into hormonal and non hormonal one. Lubuk Buaya is an area with highest DMPA injection and IUD acceptors in Padang. The aim of this research: to show the difference of menopausal age between DMPA injection acceptors and IUD acceptors in Lubuk Buaya Public Health Centre area. This was analytical research with cross sectional method. The sample is divided into 2 groups (n1 = *Menopause* women with DMPA injection history, n2 = *Menopause* women with IUD history) and taken by using quota sampling. The collecting of data involves 70 respondents in Lubuk Buaya public health centre by using questionnaire. The data were analized by univariate and *T*-test bivariate analysis (≤ 0.05). Results showed 51.4% of respondents were 56-60 years old. The average history of contraceptive use 6 years for each groups. The result of bivariate analysis showed that there was a significant difference of menopausal age between DMPA injection acceptors and IUD acceptors (p = 0.000) with 3.2 yearsas mean difference. There was a difference of menopausal age between DMPA injection acceptors and IUD acceptors. It's expected women to be more selective to choose contraceptive method by considering the long term effects that arise related to menopausal age and its phycological and physical problems on it

**Keywords** : *Menopausal age*, DMPA acceptors, IUDacceptors

## INTRODUCTION

Menopause is one phase of a woman's life which is marked by a permanent cessation of menstruation after 12 consecutive months of experiencing amenorrhoea which is not due to pathological conditions (Goodman et al., 2011). WHO in 2007 included data showing 25 million women worldwide are estimated to experience menopause each year and Asia is the region with the highest number ofwomen experiencing the initial menopause in the world (Senolinggi *etal*, 2015). Ministry of Health of theRepublic of Indonesia (2005), estimates that Indonesia's population in 2020 will reach 262.6 million people with the number of women living in menopause around 30.3 million people or 11.5% of the total population (Depkes RI, 2005) .

During menopause onset progresses, there is a progressive decrease in estrogen and progesterone hormone levels which causes physiological changes in the form of physical and psychological changes (Syalfina, 2017). Physical changes that occur can include hot flushes, night sweats, changes in the urogenital system, insomnia, cardiovascular disease and bone disorders (osteoporosis) (Alva et al., 2016). While the psychological changes that occur are attitude that is easily offended or sensitive (Kusmiran, 2012).

Women who have early or faster menopause have a greater risk of developing cardiovascular disease and osteoporosis when compared to women who are menopausal at normal or late menopause (Edmonds,

2007; Katz, 2010). Syalfina said that from various studies and studies, 75% of people who experience menopause will feel menopause as a problem or disorder. While around 25% did not feel menopause as a problem (Syalfina, 2017).

The average age of menopause in women in the world is 45-55 years and in industrialized countries 51 years, but the age range of menopause in developing countries is 43-49 years (WHO, 2012). According to a cross sectional study conducted by Dr. Muharam, Sp. OG (K), the average age of menopausal women in Indonesia is 48

± 5.3 years (Santoso, 2015). The difference in the age of menopause is influenced by several things, one of which is a woman's history of contraceptive use (Kasdu, 2005).

Broadly speaking, contraception in Indonesia is divided into hormonal

contraception and non-hormonal contraception. Unlike non-hormonal contraception which speeds up the age of menopause, hormonal contraception actually delays the age of menopause. This is supported by the results of

research conducted by Santoso conducted in 2013 and Khairani in 2015 that there is a significant difference in the age of menopause between hormonal and non-hormonal KB acceptors where the age of menopause hormonal KB acceptors is longer than the age of menopause non-hormonal birth control with difference in mean menopause age 2.84 years (Santoso, 2013; Khairani, 2015).

The highest number of hormonal and non-hormonal family planning acceptors in the working area of the Lubuk Buaya Public Health Center in Padang City were injectable family planning acceptors and IUDs, with 7767 injectable family planning acceptors and 1825 IUD family planning acceptors (Health Office, 2017). Based on the results of preliminary studies conducted on April 13, 2018 in the Lubuk Buaya work area, 10 postmenopausal mothers found 5 mothers with a history of DMPA (Depo Medroxyprogesterone Acetate) injectable birth control, 4 mothers with a history of IUD birth control and 1 mother with natural family history.

## METHOD

This was analytical research with cross sectional method. The sample is divided into 2 groups (n1 = *Menopause* women with DMPA injection history, n2= *Menopause* women with IUD history)and taken by using quota sampling. The collecting of data involves 70 respondents in Lubuk Buaya public health centre by using questionnaire. The collected data were tested for normality using the Kolmogorov-Smirnov test and obtained p> 0.05 which showed normal distributed data, then performed univariate analysis and to determine differences in mean menopause age bivariate analysis was performed using Independent T-test ($\leq 0.05$).

## RESULT

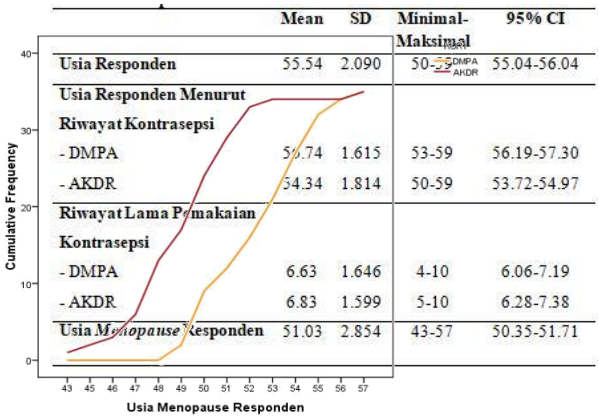
**Table1 Resepondent Age Distribution**

| Respondent Age | f | % |
|---|---|---|
| ≤ 50 | 1 | 1.4 |
| 51-55 | 33 | 47.1 |
| 56-60 | 36 | 51.4 |
| **Total** | **70** | **100** |

Based on table 1 above it can be seen that out of 70 respondents, 36 respondents (51.4%) were 56-60 years old.

**Table 1. Respondent Age, Age of Respondents According to Contraception History, Contraception Usage History, and Respondent's Menopausal Age**

| | Mean | SD | Minimal-Maksimal | 95% CI |
|---|---|---|---|---|
| Usia Responden | 55.54 | 2.090 | 50-59 | 55.04-56.04 |
| Usia Responden Menurut Riwayat Kontrasepsi | | | | |
| - DMPA | 56.74 | 1.615 | 53-59 | 56.19-57.30 |
| - AKDR | 54.34 | 1.814 | 50-59 | 53.72-54.97 |
| Riwayat Lama Pemakaian Kontrasepsi | | | | |
| - DMPA | 6.63 | 1.646 | 4-10 | 6.06-7.19 |
| - AKDR | 6.83 | 1.599 | 5-10 | 6.28-7.38 |
| Usia Menopause Responden | 51.03 | 2.854 | 43-57 | 50.35-51.71 |




Based on table 2 the mean age of respondents with a history of DMPA injection was 56.74 years with a standard deviation of 1,615 and the mean age of respondents with a history of IUD was 54.34 years with a standard deviation of 1,814. The average history of the use of DMPA injection contraception and the long history of the IUD method used in respondents in the working area of Lubuk Buaya Health Center is 6 years.

The results of univariate analysis of the dependent variable with the ratio measurement scale in table 2 shows that the average age of menopause is 51.03 years with a standard deviation of 2,854 years.

**Bivariate Analysis**

**Tabel 3. Differences Menopausal Age According to Contraception History**

| Metode Kontrasepsi | Mean | SD | SE | P *value* | n |
|---|---|---|---|---|---|
| DMPA | 52.63 | 2.211 | .374 | .000 | 35 |
| AKDR | 49.43 | 2.524 | .427 | | 35 |

Table 3 shows that the mean menopausal age between groups of respondents with a history of injectable DMPA was longer than the group of respondents with a history of IUD. The results of statistical tests using the Independent T-test obtained p value = 0.000 (p <0.05). Based on these results, it can be concluded that there are significant differences in menopausal age between DMPA injection and AKDR acceptor acceptors, which is 3.2 years in the working area of Lubuk Buaya Public Health Center.

## IV. DISCUSSION

The results of univariate analysis of age frequency distribution of respondents showed that as many as 1 person (1.4%) of respondents with age ≤ 50 years, as many as 33 people (47.1%) respondents with ages 51-55 years and as many as 36 people (51.4%) aged 56-60 year.

The mean age of respondents was 55.54 (95% CI: 55.04-56.04), with a standard deviation of 2,090. The age of the youngest respondent is 50 years and the oldest respondent is 59 years. From the results of

the interval estimation it can be concluded that 95% believed the average age of respondents was 55.04 years to 56.04 years.

The mean age of respondents with a history of DMPA injection was 56.74 years with a standard deviation of 1,615. Age of respondent with the youngest DMPA injection history was 53 years and the oldest age was 59 years. From the results of the interval estimation it can be concluded that 95% believed the average age of respondents with a history of DMPA injection was 56.19 years to 57.30 years.

The mean age of respondents with a history of IUD was 54.34 years with a standard deviation of 1,814. The age of the respondent with the youngest history of IUD was 50 years and the oldest was 59 years. From the results of the interval estimation it can be concluded that 95% believed the average age of respondents with a history of IUD was 53.72 years to 54.97 years.

The results of univariate analysis showed that the average history of the use of DMPA contraceptive methods in respondents in the Lubuk Buaya Public Health Center working area was 6.63 years with a standard deviation of 1.646 with a history of the longest use of DMPA 4 years and the longest 10 years. From the results of the interval estimation it can be concluded that 95% is believed to be the average history of the duration of use of the DMPA injection contraceptive method of respondents was 6.06 to 7.19 years.

World Health Organization (2016) recommends maximum use of hormonal contraception for 2 years (WHO, 2016). However, in practice in the field, the use of hormonal contraception exceeds WHO's maximum recommendations. Based on direct interviews with respondents, this happened because of the influence of the KB acceptor comfort factors on hormonal contraception used, socio-economic factors in the family planning acceptor and the decision on the choice of contraceptive methods completely under the control of KB acceptors.

The average history of the use of

IUD contraceptive methods in respondents in the Lubuk Buaya Public Health Center working area was 6.83 years with a standard deviation of 1,599 with a history of the shortest IUD use period of 5 years and the longest 10 years. From the results of the interval estimation it can be concluded that 95% is believed to be the average long history of using the contraceptive method of the respondent's IUD is 6.28 to 7.38 years.

The mean menopausal age of respondents was 51.03 years (95% CI: 50.35-51.71), with a standard deviation of 2,854 years. This is in accordance with the average age of menopause according to WHO, which occurs between the ages of 50-52 years (WHO, 2012).

The mean menopausal age of respondents with a history of DMPA injection was 52.63 years with a standard deviation of 2,211. The mean age of menopause respondents with a history of IUD 49.43 years with a standard deviation of 2,524. The results of statistical tests using the Independent T-test showed that the mean menopausal age between groups of respondents with a history of DMPA injection was longer than the group of respondents with a history of IUD with a p value = 0.000 ($p < 0.05$). The significant difference between menopausal age (mean difference) between DMPA injection acceptors and IUD acceptors is 3.2 years in the working area of Lubuk Buaya Public Health Center.

This is in line with research conducted by Santoso (2013), Fibrila (2014) and Khairani (2015), that there are significant differences in the age of menopause between hormonal and nonhormonal contraception groups. Hormonal contraception works by suppressing ovarian function so that it does not produce ovum (Kumalasari, 2012).

According to Masruroh (2012) states that in women who have a history of hormonal contraception use, the content of the hormone progesterone in hormonal contraception has an impact on ovarian hormonal changes, then can stimulate the pituitary not to produce these hormones. These hormonal changes cause changes in the menstrual cycle.

Menstruation occurs because of the hormones estrogen and progesterone which stimulatively stimulate the formation of the endometrium. The formation of these hormones is carried out by the ovary. Stimulation of the formation of these hormones due to FSH (follicle stimulating hormone) and LH (luteinizing hormone). The negative effects of these hormonal imbalances can cause the menstrual cycle to recede (Masruroh, 2012).

In women who use hormonal contraception will enter menopause longer so this is beneficial because it reduces the risk of cardiovascular disease or osteoporosis due to a decrease in the level of the progressive estrogen hormone entering menopause. However,long-term use of

hormonalcontraception, especially DMPA injections will also have a negative impact, one of which is a change in serum lipids because progesterone inDMPA contraception facilitates carbohydrate to fat metabolism (Syarif, 2007).

Increased levels of serum lipids can cause hyperlipidemia so that it has the potential to experience blockages and narrowing of blood vessels by fat. This will interfere with the process of oxygen supply and food substances to all organs of the body. As a result, the heart is motivated to pump blood more strongly so that it can meet the blood demand for tissues so that blood pressure increases and is susceptible to the risk of high blood pressure (Ningsih, 2012).

## CONCLUSION

Some respondents are in the postmenopausal phase, which is aged 56-60 years. The mean menopausal age of women with a history of injecting DMPA is longer than women with a history of IUD use.

There was a significant difference in mean menopause age between Depo Medroxyprogesterone Acetate (DMPA) injectable contraceptive and Uterine Contraception (IUD) contraceptives.

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# RELATIONSHIP BETWEEN CHARACTERISTIC OF TEENAGE GIRLS WITH PRIMARY DISMENOREA INCIDENCE FEMALE STUDENTS IN GRADE X AND GRADE XI AT SENIOR HIGH SCHOOL 1 PADANG CITY IN 2017

**Firdawati[1] Sunesni[2] Titia Febri Monica[3]**

*[1]Department of Public Health Faculty of Medicine UNAND, Jln Pioneer Independence No. 94 Padang, Indonesia*

*[23]Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Jln. Commerce No. 56 Padang, Indonesia*

firdawati@med.unand.ac.id[1]

**Abstract**

Primary dismenorrhea is a painful cramp in the lower abdomen that occurs before or during menstruation. In senior high school 1 Padang City, students in grade X and XI the incidence of primary dysmenorrhoea is still high. The impact of primary dysmenorrhea are decreased productivity, skipping school, and feeling disturbed during activities. The aim of this study is to determine the relationship between characteristic of teenage girls with primary dismenorrhea incidence among female students in grade X and XI at senior high school 1 Padang City in 2017.

This was quantitative with cross sectional study design conducted at senior high school 1 Padang City on November 2016– Februari 2018. Population and sample of this study are student in grade X and XI counted 106 people. Data collected by using proportional stratified random sampling. Data analysis was performed using univariate and bivariate with chi-square test, with 95% Interval confidence $\alpha = 0,05$.

The results showed 74.5% of student grade X and XI had primary dysmenorrhea. The result chi square test showed menstrual there is no relationship between menstrual period ($p = 0,094$), there was relationship between age of menarche ($p = 0,012$), nutritional status ($p = 0,001$) and sport habit ($p = 0,003$) tith incedence prymary dysmenorrhoe at grade X and XI in senior high school 1 Padang City in 2017.

There was a relationship between age of menarche, nutritional status, and sport habit with the incidence of primary dismenorrhea

**Keywords** : Characteristics of young women, incidence of primary dysmenorrhoea

## INTRODUCTION

Adolescence is a period in which the rapid growth and development both physically, psychologically, or inteklektual (Kemenkes RI, 2015). One of the most physiological changes occur in the lives of adolescents is the onset of menarche, which is often associated with menstrual problems (Aboushady, 2016). Menstruation is the period bleeding from the uterus and cyclic accompanied by desquamation or release of the endometrium. Menstruation is estimated to occur each month during the reproductive years, starting at puberty or *menarche* and ends at menopause (Ramadhy, 2011).

At the time of the natural menstrual problems in women is discomfort or severe pain, it can be called dysmenorrhea. *Dysmenorrhea* is one of the most common problems experienced by young women is pain during menstruation. These events can be divided into *primary* and*secondary*dysmenorrhea. *Primary dysmenorrhea* is pain in the abdomen abdominal cramps often in conjunction with symptoms of gastrointestinal pain, nausea, vomiting and headache. And, *of secondary dysmenorrhea* is menstrual cramps associated with pathology, and the incidence of occurrence could be years after *menarche* (Aboushady, 2016).

According to WHO, adolescents are residents in the age range 10-19 years. Number of 10-19 years age group in Indonesia according to the 2010 population census as much as 43.5 million or approximately 18% of the population. The world's estimated 1.2 billion adolescents groups or 18% of the total world population. (WHO, 2014 in Kemenkes RI, 2015).

Half of young women in Asia who have *dysmenorrhea* have limited concentration in the classroom and social activities are also limited, as many as 21.5% of young women that can only come school, and 12.0% had poor activity in schools, this shows that *dysmenorrhea* is positively correlated with stress (Kharaghani*etal*,2014). The incidence *of dysmenorrhea* in a very large world that is on average more than 50% of women in every country experiencing menstrual pain. The incidence of *dysmenorrhea* in Indonesia amounted to 64.25% comprising 54.89% *primary dysmenorrhea* 9.36%and *secondary dysmenorrhea*.*Primary dysmenorrhea is* experienced by 60-75% of adolescents, with three-quarters of teens experience mild to severe pain and a quarter again experiencing severe pain (Alatas, 2016).

The impact of *primary dysmenorrhea* is declining productivity, absence from school, and was annoyed when on the move. Most impact is largely in the incidence of *primary dysmenorrhea* is disturbed activity (Anurogo,2011).

The study was conducted Akbarzadeh (2017) in Iran that most teenage girls withage *menarche*≤12 years of *primary*dysmenorrhea.The study was conducted Gustina (2015) in Surakarta also explain the age of *menarche* faster effect on the incidence *of primary*dysmenorrhea.The results of this study are also comparable with research Novia (2008) in Sidoarjo which states that the age of *menarche* at an early age(≤12 years) have an effect on the incidence of *primary*dysmenorrhea.If the age *of menarche* occurs at an earlier age than normal, where reproduction is not ready for the change and still the narrowing of the cervix, then there will be pain during menstruation.

Nutritional factors also play an important role in the incidence of *primary*dysmenorrhea,the majority of students of normal nutritional status suffered *of primary dysmenorrhea* a small fractiongirls with overweight status (Mulastin, 2011). Based on the results of studies done Novia (2008) in Sidoarjo students with nutritional status overweight are subjected to *primary*dysmenorrhea,while malnutrition slightly *primary*dysmenorrhea.The research described above is different from the research carried out Pebriani (2016) that the incidence of nutritional status skinny, average and chubby no correlation with the incidence of *primary dysmenorrhea* in adolescent girls.

Based on the results of studies done Novia (2008) in Sidoarjo showed that *primary dysmenorrhea* the majority of respondents who long menstrual ≤7 days. In accordance with research Gustina (2015) in Surakarta old category menstrual ≤ 7 days a lot of experience *of primarydysmenorrhea*.The research result Utami*et al* (2015) in Makassar comparable with the results Gustina, long menstrual ≤ 7 days most experienced *dysmenorrhea*

The study was conducted Fajaryati (2010) in MiritKebumen that irregular exercise habits greatly affect *primary dysmenorrhea* than regular exercise. Research above in accordance with the results of research Handayani (2014) in Rokan Hulu also explained that irregular exercise most of the respondents had *primarydysmenorrhea*.And research results Wahyuti (2015) in Papua Arso, also explained that students with irregular sport habits most experienced *primary dysmenorrhea.* It can be seen from the results of interviews with students who say that they mostly feel severe pain prior to exercise regularly.

Based on the above background, the researchers are interested in knowing more about the characteristics of the relationship teenage girls withevents *primary dysmenorrhea* in SMA 1 Padang. The reasons for the author to take SMA 1 Padang city as a test site is the location that is easily accessible and is in the center of the city and learning activities of students, in terms of age, family background of students who homogeneous, is expected to be built up communication and cooperation both in the collection data merging into consideration the author to do research in this place.

## I. METHODS

This study is a quantitative research with cross sectional design, done in SMAN 1 Padang city in November 2016 - February 2018. The respondents were sisiwi class X and X were 106, *proportionallystratified random*sampling.Data obtained through questionnaires and attendance recapitulation. Data analysis Univariate and bivariate with*Chi-Square test.*

## II. RESULTS

**Table 1 Frequency Distribution**

**Characteristics of Respondents.**

| Variable | Frequency (n = 106) | Percent (%) |
|---|---|---|
| age>*menarche* | | |
| 12 years | 43 | 40.6 |
| <12 years | 63 | 59.4 |
| Nutritional Status | | |
| Skinny | 52 | 49.1 |
| Normal | 43 | 40.6 |
| Grease | 11 | 10 , 4 |
| Menstrual period | | |
| >7 days | 30 | 28.3 |
| <7 days | 76 | 71.7 |
| Sports Habits | | |
| Not good | 52 | 49.1 |
| good | 54 | 50.9 |
| **Total** | **106** | 100 |

Based on Table 1 above it can be seen that out of 106 respondents showed that more respondents withage *menarche* <12 years (59.4%), skinny (49.1%), menstrual periodof<7days (71 , 7%) and respondents with good sport habits (50.9%).

**Table 2 Frequency Distribution of Respondents Incidence Prymary*Dysmenorrhea***

| Primary Dysmenorrhoea | Frequency (n = 106) | Percent (%) |
|---|---|---|
| Yes | 79 | 74.5 |
| No | 27 | 25.5 |
| **Total** | **106** | **100.0** |

Based on table 2 it can be seen that the majority of respondents who experienced a *primary dysmenorrhea*( 74.5%).

**Table 3 Relationship Age *Menarche*with Incidence *Primary Dysmenorrhea***

| Age *menarche* | *Primary dysmenorrhoea* | | | | Number | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Yes | | not | | | | |
| | f | % | f | % | f | % | |
| ≤12yr | 53 | 84.1 | 10 | 15.9 | 63 | 100 | 0.012> |
| 12 yr | 26 | 60.5 | 17 | 39.5 | 43 | 100 | |

Based on Table 3 shows that the proportion of girls with *primary dysmenorrhea* is greater at the age of *menarche*≤12 years than girls withage> *menarche* 12 years (84.1%: 60.5%). Based on statistical test obtained significant difference(*p*= 0.012), meaning that there is a relationship between the age of *menarche* withincidence*primary dysmenorrhea* on the X and XI grade student at SMAN 1 Padang as *p*<0.05.

**Table 4 Relationship Nutritional Status with Incidence *Primary Dysmenorrhea***

| Nutritional Status of | *Primary Dysmenorrhea* | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | |
| | f | % | f | % | f | % | |
| Petite | 46 | 88.5 | 6 | 11.5 | 52 | 100 | |
| Normal | 24 | 55.8 | 19 | 44.2 | 43 | 100 | 0.001 |
| Grease | 9 | 81.8 | 2 | 18.2 | 11 | 100 | |

Based on Table 4 shows that the proportion of girls with *primary dysmenorrhea* larger than the meager nutritional status of obese and normal nutritional status (88.5%: 81.8%: 55.8%). Based on statistical test obtained significant difference(*p*= 0.001), meaning that there is a relationship between nutritional status and the incidence of *primary dysmenorrhea* the X and XI grade student at SMAN 1 Padangwith a value of *p*<0.05.

**Table 5 RelationshipMenstrual Periodwith Incidence *Primary Dysmenorrhea***

| Menstrual period | *Primary Dysmenorrhea* | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | |
| | f | % | f | % | F | % | |
| 7 days | 23 | 76.7 | 7 | 23.3 | 30 | 100 | 0.094 |
| ≤7 days | 56 | 73.7 | 20 | 26.3 | 76 | 100 | |

Based on Table 5.3 shows that the proportion of students whose *primary dysmenorrhea* greater in the menstrual period> 7 days compared to girls with long periods of<7days (76.7%: 73.7%). Based on statistical tests obtained difference was not significant(*p*= 0.094), meaning there is no relationship between menstrual period with the incidence of *primary dysmenorrhea* the X and XI grade student at SMAN 1 Padang with *p*>0.05.

**Table 6 Relationship Sports Habitswith *Primary Dysmenorrhoea***

| Sports Habits | *Primary Dysmenorrea* | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | |
| | f | % | f | % | F | % | |
| Not good | 46 | 88.5 | 6 | 11.5 | 52 | 100 | 0,003 |
| Good | 23 | 61.6 | 21 | 38.9 | 54 | 100 | |

Based on Table 5.6 shows that the proportion of girls with *primary dysmenorrhea* greater in the exercise habit is not good compared to students with good exercise habits (88.5%: 61.6%). Based on statistical test obtained significant difference*(p*= 0.003), meaning that there is a relationship between sports habits to the incidence of *primary dysmenorrhea* the X and XI grade student at SMAN 1 Padang with a value of *p*<0.05.

## DISCUSSION

### Relationship Age *Menarche* with Incidence *Primary Dysmenorrhea*

The results of the bivariate analysis showed that the percentage of students whose *primary dysmenorrhea* greater in the age of menarche ≤12 years (84.1%) of theage> *menarche* 12 years (60.5%). Based on statistical test obtained significant difference*(p*= 0.012), meaning that there is a relationship between the age of *menarche* withincidence *primary dysmenorrhea* on the X and XI grade student at SMAN 1 Padang with values*(p*<0.05).

The results of this study differ from Novia study (2008) in Sidoarjo who explained that there was no correlation between the age of *menarche* withincidence *primary dysmenorrhea* as *p*= 0.08. Differences occur because the sampling criteria of this research is the age of women of childbearing age (15-30 years). In Novia research, greaterage>*menarche* 12 years or within normal limits. At the age of respondents> 12 years were less likely to undergo *primary*dysmenorrhea.And, the analysis used data using logistic regression statistical test to look for the effect of age of *menarche* with *primary*dysmenorrhea.The results of this study differs also with research Akbarzadeh*et al* (2017) in Iran indicates that there is no significant relationship between age *of menarche* withincidence *primary dysmenorrhea* as obtained *p*= 0.15.

According to Shanon in Ramadhani (2014), *primary dysmenorrhea* happened atage*menarche* ≤ 12 years, resulting reproduction is not ready for the change and still narrowing of the cervix then there will be great pain when menstruating. Narrowing of the cervix caused by vasopressin is a hormone secreted by the posterior lobe of the pituitary gland (Anurogo, 2011). There was also a result of the uterine muscles tighten, causing discomfort and menstrual cramps (Akmal et al, 2010).

Distribution of response in this study, the bigger girls withage *menarche* ≤12 years of *primary*dysmenorrhea.This relates to the preparation of the students in the face of puberty. Preparation of teenagers in the face of puberty such as physical, psychological, nutrition and education. The role of the parents and teachers are also very influential on the readiness to undergo puberty, especially in the menstrual period.

Age *of menarche* is a major factor in the face of events schoolgirls *of primary*dysmenorrhea.The pain felt by young women a few days before menstruation and during menstruation usually due to increased secretion of hormones *prostaglandine.*Because the older the person, the more likely the person is experiencing menstruation.

One way to improve their knowledge with information from health professionals and the information of mass media and electronic means that there is (Bustami, 2014). Knowledge domain is very important in shaping a person's actions, because of the experience and the study was based on the knowledge of behavior will be more lasting than in behavior that is not based on a factor formation knowledge.

Knowledge behavior. A person's behavior is based on the knowledge and attitudes, behaviors that are not based knowledge will not last long (Yulizawati et al, 2016).

**Relationship of Nutritional Status with Incidence *Primary dysmenorrhea***

Bivariate analysis results showed that the percentage of students whose *primary dysmenorrhea* the majority of the nutritional status of underweight as much as 88.5%. Based on test results obtained statistically significant difference *p*= 0.001, meaning that there is a relationship between nutritional status and the incidence of *primary dysmenorrhea* the X and XI grade student at SMAN 1 Padangwith a value of *p*<0.05.

The results are consistent with research Madhubala (2012) in India, shows that there is a relationship nutritional status of girls who undergo *primary dysmenorrhea p*= 0.012. The low nutritional status of this case in terms of demographics and constitutional factors. This study is consistent with research Nohara*et al* (2011) in Japan, which states that the body mass index has a significant relationship with the occurrence of *primary*dysmenorrhea.In contrast to the results of research Gustini*et al* (2017) in Bukit Tinggi STIKES Cheers Buana showed there was no correlation nutritional status of girls who undergo *primary dysmenorrhea* with *p*= 0.89. The changes which occur in the course of a study Gustini, due to the results of data analysis using *t-test.*

The results are consistent with the theory that the nutritional status of women with *overweight* or obese may increase the hormone *prostaglandine*so related complaints during menstruation as *primary dysmenorrhea* (Whitney, 2011). Improved nutritional status is a risk factorthe onset of *primary dysmenorrhea*formay result in an increase in inflammatory mediators. Inflammation can cause the myometrium hypertonus so that the onset of uterine contractions and also due level s*prostaglandine* causing *dysmenorrhea* (HongJu, 2015)

Nutritional status is an important part of a person's health. Undernourishment addition will affect the growth and function of organs will also lead to disruption of reproductive function. The nutritional status of women associated with the luteal phase of the menstrual cycle, which in this phase of the nutritional needs of a much-needed, if the needs of nutrition person less in the luteal phase occurs then this causes *dysmenorrhea* (Andriyani, 2016).

In this case the normal nutritional status showed elevated levels of *prostaglandine* (PG) excess, thus causing myometrial spasms triggered by substances in the blood of menstruation similar natural fats can be found in the muscles of the uterus. On the nutritional status of fat contained excessive fat tissue which can lead to blood vessel hyperplasia (blood vessels by fatty tissue). This is a result of the hormone *prostaglandin*E stimulates the uterine muscles which affects the blood vessels to cause vasoconstriction in the endometrium during the menstrual cycle phase secretion which so disturbed the process of menstruation and the resulting *primary dysmenorrhea* (Anurogo, 2011).

**RelationshipMenstrual Period with Incidence *Primary Dysmenorrhea***

Result of bivariate analysis showed that the percentage of students whose *primary dysmenorrhea* greater long periods> 7 days as many (76.7%) of the long periods of<7days, as many (73.7%). Based on the test results are not statistically significant difference *p*= 0.094, meaning that there is no relationship between long periods with the incidence of *primary dysmenorrhea* the X and XI grade student at SMAN 1 Padang with values*(p*>0.05).

The results are consistent with the results of research Novia (2008) in Sidoarjo showed no long-standing relationship with the incidence of menstrual *dysmenorrhea* in adolescent girls with value*(p*= 0.651). Novia research results, the difference in the percentage of respondents who experienced a *primary dysmenorrhea* the various categories of long periods is not too obvious, then after testing found no statistically significant relationship. So it can be explained that long periods no effect on the incidence of *primary dysmenorrhea.* Gustina research results (2015) in Surakarta also shows there is no longer a relationship of menstruation andevents*primary dysmenorrhea* with values*(p*= 0.783). Gustina same research results with the results of this study are sampling technique with *proportional stratified random sampling* and analysis of bivariate data usingtest, *chi-square*with a 95% confidence level α = 0.05.

According to Shanon in Novia (2008) the longer menstruation occurs, the more frequent the uterus to contract, resulting in the more *prostaglandine* issued.Production due *Prostaglandine* to excessive, then the resulting pain. Increased *prostaglandine*occurring in the endometrium and decreased progesterone end of the luteal phase of the menstrual cycle. In the luteal phase or secretion of endometrial thickening of the walls of the old specify menstruation leads to increased tone and contraction of the uterine myometrium excessive (Anurogo, 2011). Continuous uterine contraction also causes the *supply* bloodto the uterus to stop temporarily so it came to pass *primary*dysmenorrhea.

Menstrual periods associated with psychological and physiological factors. Psychologically usually associated with young women emotional level unstable when new menstruate. While physiological rather the occurrence of excessive uterine muscle contraction or it can be said they are very sensitive to these hormones result in a phase of endometrialsecretion of the hormone producing *prostaglandin*e. Because the phase of menstrual secretions also determine the length of a person.

**Relationship Sport Habits with Incidence *Primary dysmenorrhea***

Result of bivariate analysis showed that the percentage of students whose *primary dysmenorrhea* the majority of which is not good as exercise habits*(88.5%).* Based on the test results are statistically significant difference*(p*= 0.003), meaning that there is a relationship between exercise habits to the incidence of *primary dysmenorrhea* the X and XI grade student at SMAN 1 Padang city with values*(p*<0.05). The results are consistent with research Wahyuti (2015) in Papua Arso SMA shows that there is a relationship between sports habits and incidence of *primarydysmenorrhea*.The results of this study, comparable to the results of research Handayani (2014) in the district of RokanHulu that found a significant relationship between exercise habits to the incidence of *primary dysmenorrhea* by value*(p*= 0.028).

Based on this research, Sumudarsono in Yustianingsih (2004) in East Java *primary dysmenorrhea* greater in girls with no exercise habits better than good exercise habits. Instudent who *dysmenorrhea* with ais not good exercise habits, can lead to oxygen can not be supplied to the blood vessel vasoconstriction. When a woman regular exercise, then the woman can provide oxygen nearly 2 times per minute so that oxygen is delivered to the blood vessel vasoconstriction.

Exercise can increase the production of endorphins (the body's natural pain killers), can increase serotonin levels. Regular exercise can reduce stress and fatigue thus indirectly also reduces pain. Familiarize sport and regular physical activity as healthy walking, running, cycling, or swimming at the time before and during menstruation, it can make the blood flow in the muscles around the uterus becomes smooth, so that the pain can be resolved or reduced.

## CONCLUSION

There is a relationship between the age of *menarche,*nutritional status, and exercise habits with *primarydysmenorrhea*.Department of Education in order to create additional policies carried out by health workers to the high school that should their health promotion of reproductive health, especially regarding the incidence of *primary dysmenorrhea.*all students to be able to learn about *primary*dysmenorrhea.Age *of*menarche,nutritional status, and exercise habits are the cause of *primary dysmenorrhoea,* so in this case need to do prevention by eating nutritious foods, avoiding stress, regular exercise fatigue and can also compress with warm water. For the next researcher to conduct further research is expected to do further research using other variables such as genetics, stress levels.

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# FACTORS THAT INFLUENCE MOTHER IN DOING ANTENATAL CARE VISIT IN PREGNANCY IN MEMORY HEALTH CENTER DELI SERDANG 2019

**Uliy Iffah[1], Sartika Sirait[2], Nurbaiti Br Singarimbun [3]**

[1]*Study ProgramMidwifery ,Medical Faculty, Universitas Andalas, Jl. Niaga No. 56 Padang, Indonesia*
[2]Study ProgramMidwifery, *STIKes Senior, Jl. Jamin Ginting KM.8,5 No.13 Medan, Indonesia*
[3]*Study ProgramMidwifery,* STIKes Senior, Jl. Jamin Ginting KM.8,5 No.13 Medan, Indonesia
uliyiffah@med.unand.ac.id[1]

**Abstract**

Pregnancy examination is an examination carried out by pregnant women both physically and mentally and saves the mother and child in pregnancy, childbirth, the puerperium, so that the post partum state is healthy and normal, not only physically but also mentally. This study aims to determine the factors that influence mothers in conducting Antenatal Care (ANC) visits during pregnancy. The research design used is cross-sectional. The study population was third trimester pregnant women who examined their pregnancies at the Kenangan Health Center in April-July 2019. The study sample was 70 pregnant women using Accidental Sampling. Data collection is done by using primary and secondary data. Data processing starts from editing, coding, processing and cleaning. Data analysis starts from univariate and bivariate with the chi square test. The results showed that there was a relationship between the age of pregnant women (p = 0,000), media information (p = 0.007), knowledge of pregnant women (p = 0.001), education of pregnant women (p = 0.001), husband support (p = 0,000) with visits ANC during pregnancy. There was no correlation between parity of pregnant women with ANC visits during pregnancy (p = 0.273). Thus it is expected that pregnant women can make a visit to the place of health services so that pregnant women can find out the condition or state of their health during pregnancy

**Keywords** : *Antenatal care*, Visit of pregnant women

## INTRODUCTION

The government's effort in reducing the Maternal Mortality Rate (MMR) with the Maternal and Child Health (MCH) program where the Antenatal Care (ANC) program is one of them. Antenatal Care (ANC) is a routine health screening service for pregnant women to diagnose obstetric complications as well as to provide information about lifestyle, pregnancy and childbirth (Backe *et al*, 2015).

Based on Data from the North Sumatra Provincial Health Office in 2017, the coverage of K4 services for pregnant women was 87.09%, this figure has not yet reached the target set in the North Sumatra Provincial Health Office Strategic Plan of 95%. The regencies / cities with the highest achievements were Deli Serdang (96.51%), South Tapanuli (96.02%) and Central Tapanuli (94.73%), while the districts / cities with the lowest achievements were South Nias (51.68%) , Gunungsitoli (60.85%) and West Nias (63.93%).

Kenangan Health Center as one of the technical implementing units of the Deli Serdang District Health Office which has the obligation to carry out health development, one of which is providing

Antenatal Care (ANC) services. Based on the 2018 Memories Health Center annual report, the coverage of K1 services was 91.50% and the coverage of k4 services was 90%. And the coverage has not yet reached the expected standard of ANC coverage, namely K1 of 95% and K4 of 95% (Profile of Kenangan Health Center, 2018).

Based on preliminary surveys conducted by researchers in the working area of Deli Serdang's Memories Health Center, information was obtained from 7 pregnant women who were currently undergoing pregnancy checkups, 3 of whom routinely conduct ANC checks every month to midwives and Puskesmas, and 4 more to check for pregnancy if there were complaints alone, irregular, not knowing the correct ANC service visit standards, and first contact with health workers at the beginning of the second trimester on the grounds of not knowing that she was pregnant, lazy to go to health services before she was sure she was pregnant, because according to them they were afraid to quickly draw her conclusions get pregnant before you feel sure you really are pregnant like the pregnancy has started to look and quite large, some say because there is nothing to deliver, and some say pregnancy is a natural thing, the experience of previous pregnancy is safe.

From the available data it can be concluded that in the working area of Deli Serdang Puskesmas memories there are still many who have not utilized Antenatal Care (ANC) services, so researchers are interested in raising research to find out the factors that influence mothers in conducting Antenatal Care (ANC) visits. during pregnancy in the working area of Deli Serdang Kenangan Health Center.

## METHODS

This research uses descriptive analytic method with cross sectional approach. This research was conducted in April to July 2019 at the Deli Serdang Kenangan Health Center in 2019. The population in this study was the third trimester pregnant women who examined their pregnancy at the Kenangan Health Center in April-July 2019 as many as 95 people. The sampling technique uses accidental sampling, which is a sample that accidentally met with researchers when checking their pregnancy can be used as a sample of 70 people.

**RESULT**

1. **Age Relationship with ANC Visit During Pregnancy**

**Table 1 Cross Tabulation of Age Relationship with ANC Visit During Pregnancy at the Deli Serdang Memories Health Center in 2019**

| Age | ANC Visit During Pregnancy | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | Not Good | | Good | | | | |
| | n | % | n | % | n | % | |
| Risky (≤20th />35 th) | 37 | 84,1 | 7 | 15,9 | 44 | 100 | |
| Not Risky (20-35 th) | 6 | 23,1 | 20 | 76,9 | 26 | 100 | 0,000 |
| **Total** | 43 | 61,4 | 27 | 38,6 | 70 | 100 | |

Table 1 showed that of 44 pregnant women aged (≤20 / 35 years) there were 37 people (84.1%) with ANC visits during poor pregnancy and 7 people (15.9%) with ANC visits during good pregnancy . While from 26 pregnant women aged (20-35 years) there were 6 people (23.1%) with ANC visits during poor pregnancy and 20 people (76.9%) with ANC visits during good pregnancy. Statistical test results obtained p = 0,000 means that there is a relationship between the age of pregnant women with ANC visits during pregnancy.

2. **Relationship of Education With ANC Visit During Pregnancy**

**Table 2 Cross Tabulation of Educational Relations With ANC Visits During Pregnancy at Deli Serdang Kenangan Health Center in 2019**

| Education | ANC Visit During Pregnancy | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | Not Good | | Good | | | | |
| | n | % | n | % | n | % | |
| Low (SD,SMP) | 35 | 76,1 | 11 | 23,9 | 46 | 100 | |
| High (SMA/D3/S1) | 8 | 33,3 | 16 | 66,7 | 24 | 100 | 0,001 |
| **Total** | 43 | 61,4 | 27 | 38,6 | 70 | 100 | |

Table 2showed that out of 46 pregnant women with low education (elementary, junior high) there were 35 people (76.1%) with ANC visits during poor pregnancy and 11 people (23.9%) with ANC visits during good pregnancy. While from 24 pregnant women with high education (SMA / D3 / S1) there were 8 people (33.3%) with ANC visits during poor pregnancy and 16 people (66.9%) with ANC visits during good pregnancy The statistical test results obtained p value = 0.001 means that there is a relationship between education of pregnant women with ANC visits during pregnancy.

### 3. Relationship of Knowledge With ANC Visits During Pregnancy

**Table 3 Cross Tabulation of Knowledge Relationship with ANC Visits During Pregnancy at Deli Serdang Memories Health Center in 2019**

| Knowledge | ANC Visit During Pregnancy | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | Not Good | | Good | | | | |
| | n | % | n | % | n | % | |
| Not Good | 33 | 78,6 | 9 | 21,4 | 42 | 100 | |
| Good | 10 | 35,7 | 18 | 64,3 | 28 | 100 | 0,001 |
| **Total** | 43 | 61,4 | 27 | 38,6 | 70 | 100 | |

Table 3showed that out of 42 pregnant women with poor knowledge there were 33 people (78.6%) with ANC visits during poor pregnancy and 9 people (21.4%) with ANC visits during good pregnancy. While from 28 well-known pregnant women, 10 (35.7%) with ANC visits during pregnancy were poor and 18 (64.3%) with ANC visits during good pregnancy. Statistical test results obtained p value = 0.001 means that there is a relationship between knowledge of pregnant women with ANC visits during pregnancy.

### 1. Relationship between Parity and ANC Visit During Pregnancy

**Table 4 Cross Tabulation of Relationship between Parity and ANC Visit During Pregnancy at the Deli Serdang Memories Health Center in 2019**

| Parity | ANC Visit During Pregnancy | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | Not good | | Good | | | | |
| | n | % | n | % | n | % | |
| Risky (≥4 people) | 23 | 69,7 | 10 | 30,3 | 33 | 100 | |
| Not Risky(<4 people) | 20 | 54,1 | 17 | 45,9 | 37 | 100 | 0,273 |
| **Total** | 43 | 61,4 | 27 | 38,6 | 70 | 100 | |

Table 4 showed that of 33 pregnant women with parity ≥4 people there were 23 people (69.7%) with ANC visits during pregnancy were not good and 10 people (30.3%) with ANC visits during good pregnancy. Whereas out of 37 pregnant women with parity <4 people there were 20 people (54.1%) with ANC visits during poor pregnancy and 17 people (45.9%) with ANC visits during good pregnancy. Statistical test results obtained p value = 0.273 means that there is no relationship between parity of pregnant women with ANC visits during pregnancy.

**2. Relationship of Media Information With ANC Visit During Pregnancy**

**Table 5 Cross Tabulation of Information Media Relationship With ANC Visit During Pregnancy at Deli Serdang Memories Health Center in 2019**

| Information Media | ANC Visit During Pregnancy | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | Not Good | | Good | | | | |
| | n | % | N | % | n | % | |
| No information obtained | 34 | 73,9 | 12 | 26,1 | 46 | 100 | |
| Information obtained | 9 | 37,5 | 15 | 62,5 | 24 | 100 | 0,007 |
| **Total** | 43 | 61,4 | 27 | 38,6 | 70 | 100 | |

Table 5showed that of 46 pregnant women who did not obtain information there were 34 people (73.9%) with ANC visits during pregnancy were poor and 12 people (26.1%) with ANC visits during good pregnancy. While from 24 pregnant women with parity <4 people there were 9 people (37.5%) with ANC visit during pregnancy was not good and 15 people (62.5%) with ANC visit during good pregnancy. Statistical test results obtained p value = 0.007 means that there is a relationship between information media and ANC visits during pregnancy.

**3. Relationship between Husband's Support and ANC Visit During Pregnancy**

**Table 6 Cross Tabulation Relationship between Husband's Support and ANC Visit During Pregnancy at Deli Serdang's Memories Health Center in 2019**

| Husband / family support | ANC Visit During Pregnancy | | | | Total | | *p value* |
|---|---|---|---|---|---|---|---|
| | Not Good | | Good | | | | |
| | n | % | N | % | n | % | |
| No support | 39 | 86,7 | 6 | 13,3 | 45 | 100 | |
| Support | 4 | 16 | 21 | 84 | 25 | 100 | 0,000 |
| **Total** | 43 | 61,4 | 27 | 38,6 | 70 | 100 | |

Table 6 showed that of 45 pregnant women who did not have the support of their husbands / family there were 39 people (86.7%) with ANC visits during pregnancy were poor and 6 people (13.3%) with ANC visits during good pregnancy. While from 84 pregnant women who received support from their husbands / family, there were 4 people (16%) with ANC visits during pregnancy were not good and 21 people (84%) with ANC visits during good pregnancy. Statistical test results obtained p value = 0,000 means that there is a relationship between husband / family support with ANC visit during pregnancy

**DISCUSSION**

**1. Age Relationship with ANC Visit During Pregnancy**

The results showed that there was a relationship between the age of pregnant women and ANC visits during pregnancy (p = 0,000). Of (37.1%) pregnant women aged 20-35 years and did not make poor antenatal care visits, this can occur because some of the pregnant women think that at that age also do not

need to do a pregnancy check if there are no problems as in the experience before giving birth, this can also be seen from the results of research that there are still many mothers aged 20-35 years who do not do a complete antenatal care visit, see the situation they faced before labor and did not experience problems and did not do a complete antenatal care visit then this can be affecting pregnant women is not doing good antenatal care visits.

**2. Relationship of Education With ANC Visit During Pregnancy**

The results showed that there was a relationship between education of pregnant women and ANC visits during pregnancy (p = 0.001). Educated women will be more open to new ideas and changes to get proportional health services because the benefits of health services will be fully realized. The level of education is the stage of education which is determined based on the level of development of students, the objectives to be achieved, and the abilities developed. Education in Indonesia recognizes three levels of education, namely basic education (SD / MI / Package A and SLTP / MTs / Package B), secondary education (high school, vocational school), and higher education which includes diploma, bachelor, master, doctoral, and specialists organized by universities.

**3. Relationship of Knowledge With ANC Visits During Pregnancy**

The results showed that there was a relationship between knowledge of pregnant women and ANC visits during pregnancy (p = 0.001). A mother's knowledge about pregnancy is very necessary to undergo the process of pregnancy. Many sources of information that can be obtained by mothers to increase knowledge about pregnancy, such as from health workers (midwives, doctors) when undergoing examinations by asking questions (counseling), and from the mass media that is information obtained from electronic media (television) and print media (magazines, newspapers, tabloids, posters, etc.). In general, if the mother's knowledge is good, she will use health care facilities.

Information about Antenatal Care (ANC) can be obtained in print or electronic media, counseling by health workers. This information will increase the knowledge of pregnant women about the importance of visiting Antenatal Care (ANC), so that it can encourage mothers to visit Antenatal Care (ANC) regularly. Kasyou (2008), that the role of government in providing information about Antenatal Care (ANC) is very helpful for pregnant women to obtain better information.

**4. Relationship between Parity and ANC Visit During Pregnancy**

The results showed that there was no relationship between parity of pregnant women with ANC visits during pregnancy (p = 0.273).

The results also showed that of 33 pregnant women with parity ≥4 people there were 23 people (69.7%) with ANC visits during poor pregnancy and 10 people (30.3%) with ANC visits during good pregnancy. Whereas out of 37 pregnant women with parity <4 people there were 20 people (54.1%) with ANC visits during poor pregnancy and 17 people (45.9%) with ANC visits during good pregnancy. This means that

pregnant women who do not make antenatal care visits can occur because some of them have a large number of children (an average of 4-6 people) and have never experienced problems during pregnancy and also in the face of previous deliveries so that they do not motivated to make a complete antenatal care visit to the health service.

Mothers who are pregnant for the first time are so new that they are motivated to have their pregnancy checked by health. Conversely, a mother who has given birth to more than one person has the assumption that she has experience so that she is not motivated to have her pregnancy checked. Parity 2-3 is the safest parity from the point of view of maternal death. Parity 1 and high parity (more than 3) have a higher maternal mortality rate. The higher the parity of the mother, the less good the endometrium. According to her pregnancy (Ministry of Health Republic of Indonesia, 2016), mothers who have given birth have experience of Antenatal Care (ANC), so that from previous experience, it is again carried out to maintain health

**5. Relationship of Information Media with ANC Visit During Pregnancy**

The results showed that there was an association of information media with ANC visits during pregnancy (p = 0.007). This can occur because pregnant women do not get information about antenatal care so this will affect pregnant women not doing antenatal care. This study is in line with research (Sari et al., 2018) about the factors that influence the compliance of pregnant women in carrying out pregnancy examinations at the Cibibbulang Public Health Center in Bogor, West Java Province in 2018, showing that there is a relationship between information media and incompleteness (p = 0.043).

The results showed that of 46 pregnant women who did not obtain information there were 34 people (73.9%) with ANC visits during pregnancy were poor and 12 people (26.1%) with ANC visits during good pregnancy. While from 24 pregnant women with parity <4 people there were 9 people (37.5%) with ANC visit during pregnancy was not good and 15 people (62.5%) with ANC visit during good pregnancy. This means that with pregnant women not getting information about antenatal care, this will affect pregnant women not doing prenatal care. Information related to antenatal care can be obtained from health workers through counseling, and also through brochures or leaflets provided from Posyandu or Puskesmas. However, from the results of the study it can be seen that the unavailability of brochures / leaflets about antenatal care in Posyandu / Puskesmas so that information obtained by pregnant women about antenatal care is still lacking.

**6. Relationship between husband's support and ANC visit during pregnancy**

The results showed that there was a relationship between husband / family support with ANC visits during pregnancy (p = 0,000).

The reinforcing factor in the utilization of antenatal care services aside from puskesmas staff is husband and family support. Husband and family support is something that cannot be ignored in the behavior of

pregnant women. For example husband / family needs to provide an explanation and teach the mother to check the pregnancy at least 4 times during pregnancy.

## CONCLUSION

There is a relationship between the age of pregnant women, media information, knowledge, education and husband support with ANC visits during pregnancy. There is no relationship between parity of pregnant women with ANC visits during pregnancy. Suggestions It is expected that pregnant women can make a visit to the place of health services so that pregnant women can know the condition or state of their health during pregnancy. To the husband to be able to provide good support to the mother in conducting pregnancy examination visits such as reminding the mother to do a pregnancy check up, encourage the mother to check the pregnancy until K-4, deliver and accompany the mother when carrying out a pregnancy check up.

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# RELATIONSHIP BETWEEN EXCLUSIVE BREASTFEEDING WITH *STUNTING* EVENTS IN AGE 12-35 MONTHS IN AIR DINGIN HEALTH CENTER PADANG 2018

**Aldina Ayunda Insani[1], Firdawati[2] , Wella Dwi Anjani[3]**

[1]*Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[2] *Departmen of Public Health, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[3] *Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
aldinaayundainsani@med.unand.ac.id[1]

**Abstract**

*Stunting* is one of the nutritional problems due to chronic malnutrition in the first 1000 days of life that will affect the growth and development of physical and mental children. One of the causes of *stunting* is the lack of nutritional intake during a toddler where exclusive breastfeeding is the best nutrition received by a baby in the first 6 months of life. The highest number of *stunting* children in the city of Padang is in the working area of Air Dingin Health Center . The purpose of this study was to determine the relationship of exclusive breastfeeding with the incidence of *stunting* in infants aged 12-35 months in the working area of Air Dingin Health Center, Padang in 2018.

This study was a cross sectional analytic approach, carried out in the region of Cold Water from February to July 2018. Samples were toddlers aged 12-35 months as many as 77 people. Data collection by interview and body Length measurement. A data analysis was univariate and bivariate using the *chi square* test with p-value $\leq 0.05$

The results showed that the percentage of *stunting* cases in children aged 12-35 months was greater in infants who were not given exclusive breastfeeding (51.4%) compared to children under five who received exclusive breastfeeding (19%). The results of bivariate analysis showed that there was a relationship between exclusive breastfeeding and the incidence of *stunting* with *p-values* $\leq 0.05$

It can be concluded that there is a relationship between exclusive breastfeeding and the incidence of *stunting* in infants aged 12-35 months . Therefore breastfeeding mother must give exclusive breastfeeding to the baby so that the baby can grow optimally

**Keywords** : Exclusive Bretfeeding, Stunting

## INTRODUCTION

*Stunting* (short) is a result of chronic malnutrition that occurs within the first 1000 days of a child's life (Bloem, 2013). Children under five are said to be *stunting* if their body length according to age (BL / A) or height according to age (BH / A) is below -2 Standard Deviation (SD) (UNICEF, 2013).

In 2016, an estimated 22.9% (155 million) of toddlers who experienced *stunting* in the world (WHO, 2017). If it continues, an estimated 127 million children under five experience *stunting* in 2025 (WHO, 2014). According to WHO the number of children under five *stunting* in Asia is 56% and 17.5% are in Southeast Asia (WHO, 2017).

The incidence of *stunting* in infants in Indonesia in 2013 was 37.2%, an increase from 2010 (35.6%) and 2007 (36.8%) (Ministry of Health, 2013). According to the results of Riskesdas in 2013, the prevalence of *stunting* in children under the age of 5 years of male sex often occurs at the age of 12-35

months with a prevalence of 41.2% at the age of 12-23 months and 43% aged 24-35 month (Ministry of Health, 2013).

According to the National Team for the Acceleration of Poverty Reduction (TNP2K), *stunting is* caused by various factors such as poor parenting patterns including feeding within the first 2 years after birth, still lack of access to health services during pregnancy and after childbirth, lack of family access to nutritious food, and limited access to clean water and sanitation (TNP2K , 2017). According to research conducted in Jember, there are several factors related to *stunting* events such as maternal education, family income, maternal knowledge about nutrition, exclusive breastfeeding, age of breastfeeding, zinc and iron adequacy, history of infectious diseases and genetic factors (Aridiyah *et al*, 2015).

*Stunting* can be prevented through feeding infants focused on the first 1000 days of life (Ministry of Health, 2016). Feeding for infants aged 0-6 is sufficient with breast milk (ASI) without any additions (exclusive breastfeeding). Starting at the age of 6 months, breastfeeding complementary foods can be given but still accompanied by breastfeeding until the age of 2 years (WHO, 2003).

Providing exclusive breastfeeding during the first 6 months of life supports the growth and development of the baby and can protect babies from various diseases such as pneumonia, respiratory and digestive infections and so on (American Academy of Pediatrics, 2012). According to research in Malawian, babies who were exclusively breastfed were 1.08 cm taller and 0.46 kg heavier than babies who were not given exclusive breastfeeding (Kuchenbecker *et al* ., 2015). Research by Kramer *et al* (2012) showed that there was an increase in body length of 1 mm / month in infants aged 9-12 months exclusive breastfeeding for 6 months compared to babies who only breastfed for 3 months.

According to 2017 Nutrition Status Monitoring (PSG) for toddlers, as many as 30.6% of toddlers in West Sumatra experience *stunting* with the incidence in the city of Padang at 22.6% (Ministry of Health, 2018). The results of the Padang City Health Office report in 2015, the highest incidence of *stunting* in children under five, namely in the Air Dingin Health center (34.6%). While the results of the Padang City Health Office report showed that the coverage of exclusive breastfeeding in 2016 and 2017 in the working area of the Air Dingin Health Center had a two-fold increase of 33.85% to 69%.

According to WHO, an area experiences nutritional problems especially *stunting* if the incidence is more than 20% (Ministry of Health, 2018). The incidence of *stunting* in an area indicates that there is a nutritional disorder that has been going on for a long time (WHO, 2010). Therefore, specific interventions need to be done, namely improving nutrition within the first 1000 days of life, one of which is to encourage exclusive breastfeeding (TNP2K, 2017).

**Method**

This type of research is analytic with *cross sectional method.* The study population was all toddlers aged 12-35 months . Samples were taken using the *simplerandom sampling technique* . Data collection was carried out in February-July 2018 with BL / BH measurements and filling out questionnaires as many as 77 respondents in the work area of Puskesmas Air Dingin . Data analysis was univariate and bivariate with *chi-square* analysis ($p \leq 0.05$).

**Results**

**Table1.Characteristics of research subjectsbased on education and employment**

| Characteristics | Frequency (f) | Percentage (%) |
|---|---|---|
| **Education** | | |
| Low | 17 | 22.1 |
| Middle | 47 | 61.0 |
| High | 13 | 16,9 |
| **Total** | **77** | **100** |
| **Work** | | |
| Work | 8 | 10.4 |
| Does not work | 69 | 89.6 |
| **Total** | **77** | **100** |

Table 1 shows that the majority of maternal education is in the middle category (high school or equivalent) which is 61% (47 people) and in general mothers do not work, namely 89.6% (69 people)

**Table.2Characteristics subjectPenelitianby Age Mother, TB and Z-Score Toddler Toddler**

| Variable | Mean ± SD |
|---|---|
| Mother's age (years) | 30.23 ± 5.758 |
| Toddler BH | 81.77 ± 7.537 |
| Z- *Score* Toddler | - 1.00 ± 1.136 |

Table 2 shows that the average age of the mother is 30.23 years with a standard deviation of 5.758, the average height of children aged 12-35 months is 81.77 cm with a standard deviation of 7.537 and the average Z-Score TB / U for toddlers aged 12-35 months, namely - 1.00 with a standard deviation of 1.136.

**Univariate Analysis**

**Table3.Frequency Distribution of Respondents based on knowledge**

| Variable | f | % |
|---|---|---|
| exclusive breastfeeding | 42 | 54.5 |
| Not exclusive breastfeeding | 35 | 45.5 |
| **Total** | **77** | **100** |

Based on table 3 above it can be seen that out of 77 respondents 42 mothers (54.5%) gave exclusive breastfeeding

**Table4.Frequency Distribution of Respondents based on IUD security perceptions**

| ***Stunting*level** | **f** | **%** |
|---|---|---|
| *Stunting* | 26 | 33.8 |
| Normal | 50 | 66.2 |
| **Total** | **77** | **100** |

Based on table 4 above it can be seen that out of 77 children under the age of 12-35 months, 26 (33.8%) of them experienced *stunting*

**Ananalysis of Bivariat**

**Table5Relationshipof Exclusive Breastfeeding with*Stunting*Eventsin Children Aged 12-35 Months in the Cold Water Health Center Work Area**

| **Exclusive breastfeeding** | ***Stunting*** | | | | **amount** | | ***p-value*** |
|---|---|---|---|---|---|---|---|
| | **Yes** | | **No** | | | | |
| | **f** | **%** | **f** | **%** | **f** | **%** | |
| No | **18** | **51.4** | **17** | **48,6** | **35** | **100** | |
| Yes | **8** | **19** | **34** | **81** | **42** | **100** | 0.006 |

Table 5 shows that the percentage of *stunting* occurrences in children aged 12-35 months was greater in infants who were not given exclusive breastfeeding (51.4%) compared to infants who received exclusive breastfeeding (19%). Based on statistical tests obtained *p-value 5* 0.05 ( $p$ = 0.006), meaning that there is a relationship between exclusive breastfeeding and the incidence of *stunting* in infants aged 12-35 months in the Air Dingin Health Center Work Area .

## IV.DISCUSSION

### *Stunting*incident

In this study, the percentage of *stunting* incidence was 33.8%, while the percentage of children with normal height was 66.2%. When compared with global and national data, the percentage of *stunting* in the Working Area of Puskesmas Air Dingin is higher than the global data (22.9%) and lower than the National data (37.2%) (WHO, 2017; Ministry of Health 2013). The results of this study were lower when compared to the Province of East Nusa Tenggara with the highest incidence of *stunting* (51.7%) (Ministry of Health, 2013) and lower than the research conducted by Ibrahim and Faramita (2014) in the work area of the Barombong Health Center in Makassar City The year 2014 with *stunting* problems was 54.7% .

Based on the research conducted in children aged 6-24 months in Penanggalan Subulussalam sub-district of Aceh province, it was shown that breastfeeding is not exclusive, giving too early breastfeeding complementary foods and lack of feeding practices contributed to the incidence of *stunting* 74.5%, 74.5% and 63.7% (Lestari *et al* , 2014). According to the results of a study conducted in Northern Ethiopia, the determinant factors for *stunting* were low birth weight, female gender, older age, feeding errors, lack of ANC visits (Abeway, 2018). Research in Kampung Tambak Lorok, Tanjung Mas Subdistrict, Semarang City shows that low birth weight affects the incidence of *stunting.* However, if the child is given exclusive

breastfeeding, he will be able to pursue his growth and have the possibility of achieving height according to his age (Syabandini, 2018).

According to WHO (2010), health issues are considered very high if the prevalence *of stunting* ≥40%, considered high if the prevalence *stunting* 30-39% is considered moderate if the prevalence *of stunting* of 20-29%, and the prevalence of *stunting* considered low if ≤ 20%. Based on the results of research conducted in the working area of the Cold Water Health Center in 2018, *stunting* problems were found including the nature of public health problems in the high category.

**Exclusive breastfeeding**

Based on the results of the study, more than half of toddlers aged 12-35 months in the Working Area of the Air Dingin Health Center received exclusive breastfeeding (54.5%). While the rest are not exclusively breastfed (45.5%). The results of this study are in line with the study of Lestari *et al* (2014) in which infants who received exclusive breastfeeding (52.73%) were more than babies who were not given exclusive breastfeeding (47.27%).

The achievement of exclusive breastfeeding can be influenced by educational factors, where most mothers are 61% secondary education (high school or equivalent) and 16.9% have tertiary education (graduated from diploma, bachelor and master education). Supported by Sihombing's research in the 2017 Hinai Left Health Center Work Area that the better the mother's education, the better information about maternal nutrition will be absorbed especially and will support exclusive breastfeeding (Sihombing, 2018). In addition, maternal factors that work will influence the success of exclusive breastfeeding because the mother collides between working time and breastfeeding (T importok, 2018). When viewed from the results of the study, mothers generally do not work (89.6%). Other studies that support the failure of exclusive breastfeeding practices are research conducted in Mexico that the reason mothers give alternative foods other than breast milk in the first 6 months is insufficient breastfeeding (22.7%), feeling dissatisfied (22.7), working mother (9.1%) and others (31.8%) (Cortes, 2018).

Based on the results of interviews conducted, the provision of food other than breastmilk given by mothers included formula milk, bananas, biscuits, milk porridge and rice porridge. Another study conducted on children aged 6-24 months in the Penanggalan sub-district of Subulussalam province in Aceh province found that foods other than breast milk are often given by mothers, namely honey with the reason that children are still hungry. In addition, it is also given such as starch, formula milk and filter porridge (Lestari *et al* , 2014).

**Relationship of Exclusive Breastfeeding with*Stunting*Eventsin Children Aged 12-35 Months in the Air Dingin Health Center**

The results of the bivariate analysis showed that the percentage of children under five who experienced *stunting were* more common among children under five who did not receive exclusive breastfeeding (51.4%) compared to children under five who received exclusive breastfeeding (19%). The results of the *chi square* test showed that there was a relationship between exclusive breastfeeding and the incidence of *stunting* in infants aged 12-35 months in the working area of the Air Dingin health center.

*Stunting* is a result of nutritional deficiencies during pregnancy and the first two years of life (Quinn, 2013). Therefore, the practice of feeding especially exclusive breastfeeding will have an impact on the child's nutritional status (Rahman, 2018). According to research in Randegan Village,

Tanggulangin Sub-district, Sidoarjo Regency, infants who were exclusively breastfed, 95.5% had good nutritional status and only 4.5% experienced malnutrition (Yustianingrum and Adriani, 2017).

The results of this study are in line with the research of Taufiqoh *et al* (2017), the proportion of *stunting* children is more common in children who are not exclusively breastfed, where 30% of them experience *stunting* and a risk of 3,706 times. Supported by other research conducted in West Tulang Bawang District in 2018 shows a significant relationship between exclusive breastfeeding and the incidence of *stunting* (Rahayu *et al*, 2018).

In contrast to the results of the research by Bertalina and Amelia (2018) stated that there was no relationship between exclusive breastfeeding and the incidence of *stunting.* Supported by research conducted on children less than two years in Rwanda that exclusive breastfeeding was not associated with the incidence of *stunting* because exclusive breastfeeding was a factor of protection against *stunting* but did not address other factors such as nutritional deficiencies, infections and diarrhea (Nsereko *et al* , 2018) . Other studies are also different namely research conducted on 6,956 children aged 6-23 months in Indonesia that exclusive breastfeeding was not associated with the incidence of *stunting* due to limited secondary data so that it cannot be clearly distinguished exclusive breastfeeding ≥ 6 months with exclusive 6 months ASI (Paramashanti *et al*, 2015).

Menuru t Roesli (2010), breast milk is rich in lactose which is useful to help absorption of calcium which is very important for bone growth. In addition, in breast milk there are also major minerals such as iron, calcium, zinc, magnesium and copper, and if this mineral deficiency can cause several disorders such as impaired physical growth and intelligence, impaired bone growth, changes in transmission of nerve impulses, impaired immunological function and changes in enzymatic systems, myelinization and hemoglobin (Andrade *et al* , 2014). Children who are not exclusively breastfed are more at risk of *stunting* because they are susceptible to infections such as diarrhea, which will result in decreased appetite and disruption of absorption of nutrients so that their growth is disrupted (Lestari *et al* , 2014). According to research conducted in Nepal in 2011, the longer the duration of breastfeeding (> 12 months) is, the lower the risk of a toddler experiencing *stunting* will also be smaller (Tiwari *et al*, 2014).

## Conclusion

1. One third of toddlers aged 12-35 months in the working area of the Air Dingin Health Center experience *stunting.*
2. Nearly half of mothers do not give exclusive breastfeeding to babies.
3. There is a relationship between the relationship of exclusive breastfeeding and the incidence of *stunting.*


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# Factors Associated with Menstrual Hygiene Practices in Adolescent Girls in the Minangkabau Village Islamic Boarding School in Padang.

**Edison[1] , Ulvi Mariati[2] Nisa Ul Aqila, [3]**

*[1]Department of Nutritions, Faculty of Medicine, Universitas Andalas, Indonesia*
*[2] Health Polytecnic Mercu Bakti Jaya, Padang, Indonesia*
*3 Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
edison@gmail.com[1]

**Abstract**

*Menstrual Hygiene* is a practice for maintaining cleanliness and the health of adolescent reproductive organs during menstruation. Poor menstrual hygiene practices can have a negative impact on adolescents. The purpose of this study was to determine the factors associated with the practice of *menstrual hygiene for* girls in the Minangkabau Village Boarding School in Padang.

This study used a design *cross sectional* and was conducted at the Minangkabau Village Islamic Boarding School from August 2019 to September 2019. The subjects of this study were all female students who had menstruated as many as 53 people and census sampling methods. Data collection was carried out using a questionnaire. Univariate and bivariate data analysis using *chi-square* ($p < 0.05$).

The results showed that the factors related topractices *menstrual hygiene* using thetest *chi-squarewere* belief in culture with a value of $p = 0.738$, interaction with teachers with a value of $p = 0.432$, interaction with peers with a value of $p = 0.017$ and the feasibility of sanitation with a value of $p = 0.017$. Based on the results of the study found 2 variables related topractices, *menstrual hygiene* namely interaction with peers and the feasibility of sanitation, and 2 variables do not have a relationship withpractices, *menstrual hygiene* namely belief in culture and interaction with teachers

**Keywords** : Menstrual Hygiene, Hygiene Practices, Culture, Sanitation

## INTRODUCTION

*Menstrual hygiene* is a critical problem that determines the degree of health of adolescents and will continue to be practiced throughout his life (Adika, 2013). Based on statistical data in Indonesia in 2012, of the 43 million women aged 10-14 years of age havebehavior *menstrual hygiene* very poor. This is due to the phenomenon in the community that feels taboo to discuss menstrual problems in the family influencingbehavior *menstrual hygiene* in women in their early teens (Prayitno, 2014).

problems *Menstrual hygiene* are more common in developing countries. From several studies conducted, the incidence *menstrual hygiene* of pooris common in Asian and African countries (Uzochukwu, 2009). This is due to the inadequate facilities related to menstrual hygiene management (MKM) in developing countries (Plan International and The SMERU Research Institute, 2019). In addition, knowledge and access to information related to reproductive health are also lacking, resulting in a lack of women's attention to the health of their reproductive organs (Yusiana and Saputri, 2016).

Based on research conducted by UNICEF (2015) on *Menstrual Hygiene Management* of 1402 students in 16 schools in 4 provinces in Indonesia, it was found that the practice of *menstrual hygiene is* adolescentstill relatively poor. This is caused by inadequate knowledge of adolescents related to menstrual hygiene management, the culture that circulates in the community relating to menstruation and inadequate facilities and infrastructure resulting inpractices *menstrual hygiene* poor teenage. The inadequacy of the facilities and infrastructure in question is inadequate water for washing, small and unclean toilets, and lack of privacy that makes young women reluctant to change pads in schools.

As for the consequences that occur if adolescent girls do not behave *menstrual hygiene* properly, then the teenager will be exposed to infectious diseases such as reproductive tract infections, pelvic

inflammatory disease, cervical cancer and possible urinary tract infections (Wakhidah, 2014). According to Rahmatika (2010) states that the triggering factors for cases of reproductive tract infections include low immunity of 10%, *menstrual hygiene* poor30% and procedures for using pads that are less than 50%.

Pesantren is a place of education and teaching that emphasizes Islamic religious instruction and is supported by dormitories as a permanent residence for female students (Qamar, 2005). In general, the behavior of female students living in Islamic boarding schools received less attention accompanied by a lack of knowledge about health and health behaviors. Especially knowledge about reproductive health is still low due largely students consider it is taboo (Mairo *et.al.*,2015).

The results of a preliminary study conducted by researchers at the Minangkabau Village Islamic Boarding School in Padang found that the condition of the Islamic Boarding School was not conducive as the students slept in a shared room with no rooms for each, the building was still made of plywood, non-doorless bathrooms and the lack of access to health, especially reproductive health.

Based on interviews with 10 female students at the Minangkabau Village Islamic Boarding School it was found that they felt taboo about menstrual talk because they thought that it was the privacy of each individual that did not need to be known by others. Most of the female students get information about menstrual hygiene management is limited to foster mothers only and feel ashamed to discuss it with peers. From the results of the interview they said they only changed pads when they were full, and complained of discomfort during menstruation due to inadequate facility conditions such as frequent water death.

## I. METHODS

This type of research is an analytic study withdesign *cross sectional*. Data collection was conducted from January to August 2019. The population in this study were all teenage girls who had menstruated in the Minangkabau village Islamic boarding school in Padang, totaling 63 people. The size of the study sample was 53 subjects. Sampling was done bytechnique *census.* Data processing was performed by test *chi square* ($p < 0.05$).

## II. RESULTS

**Univariate Analysis Results**

**Table 1. Characteristics of Respondents**

| Variable | f | % |
|---|---|---|
| **Menstrual Hygiene Practices** | | |
| Less | 11 | 20.8 |
| Good | 42 | 79.2 |
| **Belief in Culture** | | |
| Belief | 30 | 56.6 |
| Not Believe | 23 | 43.4 |
| **Interaction with Teachers** | | |
| Less | 13 | 24.5 |
| Good | 40 | 75 , 5 |
| **Interaction with peers** | | |
| Less | 13 | 24.5 |
| Good | 40 | 75.5 |
| **Eligibility of sanitation** | | |
| Not feasible | 21 | 39.6 |
| Eligible | 32 | 60.4 |

| | | |
|---|---|---|
| **Total** | 53 | 100 |

From the table above it is found that the majority of respondents (79.2%) havepractices *menstrualgood hygiene* , most respondents (56.6%) have confidence in culture, most respondents (75.5%) have interactions with teachers in the good category, most respondents (75.5%) have interactions with peers in good category, most of the respondents (60.4%) stated that proper sanitation.

**Bivariate Analysis Results**

**Table 2. Relationship of Belief in Culture with Menstrual Hygiene Practices**

| **Belief in Culture** | **Menstrual Hygiene Practices** | | | | | | **p (value)** |
|---|---|---|---|---|---|---|---|
| | **Less** | | **Good** | | **Total** | | |
| | f | % | f | % | f | % | |
| Believe | 7 | 23.3 | 23 | 76.7 | 30 | 100 | |
| Not believe | 4 | 17, 4 | 19 | 82.6 | 23 | 100 | 0.738 |
| **Total** | 11 | 20.8 | 42 | 79.2 | 53 | 100 | |

Table 2 shows thatpractices *menstrual hygiene* are more or less higher in percentage of adolescents who believe in culture (23.3%) compared to those in adolescents who believe (17 , 4%). P value of 0.738 which indicates no significant relationship.

**Table 3. Relationship of Interaction with teachers with Youth Menstrual Hygiene Practices**

| **Interaction with Teacher** | **Menstrual Hygiene Practices** | | | | | | **p (value)** |
|---|---|---|---|---|---|---|---|
| | Less | | Good | | Total | | |
| | f | % | f | % | f | % | |
| Less | 4 | 30.8 | 9 | 69.2 | 13 | 100 | |
| Good | 7 | 17.5 | 33 | 82.5 | 40 | 100 | 0.432 |
| **Total** | 11 | 20.8 | 42 | 79, 2 | 53 | 100 | |

Table 3 shows thatpractices *menstrual hygiene* were more or less higher in adolescents who interacted with teachers in the less category (30.8%) compared to adolescents who interacted with their teachers in the good category (17.5%). The p *value is* 0.432 which indicates that there is no significant relationship.

**Table. 4. Relationship with Peers Interaction with Menstrual Hygiene Practices TeensPeers Menstrual Hygiene**

| **Interaction with Peers** | **Practice** | | | | | | **p (value)** |
|---|---|---|---|---|---|---|---|
| | Less | | Good | | Total | | |
| | f | % | f | % | f | % | |
| Less | 6 | 46.2 | 7 | 53.8 | 13 | 100 | |
| Good | 5 | 12.5 | 35 | 87.5 | 40 | 100 | 0.017 |
| **Total** | 11 | 20.8 | 42 | 79.2 | 53 | 100 | |

Table 4 shows thatpractices *menstrual hygiene* were more or less higher in adolescents who interacted with their peers in the less category (46.2%) compared to adolescents who had interactions with peers in the good category (12.5). P *value of* 0.017 which indicates a significant relationship.

**Table 5. Relationship of Sanitation Eligibility with Menstrual Hygiene Practices Adolescent**

| Eligibility of Sanitation | Practices Menstrual Hygiene | | | | | | p (value) |
|---|---|---|---|---|---|---|---|
| | Less | | Good | | Total | | |
| | f | % | f | % | f | % | |
| Not feasible | 8 | 38.1 | 13 | 61.9 | 21 | 100 | |
| Eligible | 3 | 9.4 | 29 | 90, 6 | 32 | 100 | 0.017 |
| **Total** | 11 | 20.8 | 42 | 79.2 | 53 | 100 | |

Table 5 shows thatpractices *menstrual hygiene* were more or less the percentage in adolescents who stated that sanitation was not feasible (38.1%) compared to adolescents who declared decent (9.4% ). P value of 0.017 which indicates a significant relationship.

## III. DISCUSSION

### Univariate Analysis

### Menstrual Hygiene Practices

results of the study showed that the percentage of goodpractices *menstrual hygiene* was higher (79.2%) compared topractices *menstrual hygiene* lacking (20.8%). The results of this study are consistent with research conducted by Bujawati *et.al* (2017) at the Babul Khaer Islamic Boarding School in Bulukumba Regency, South Sulawesi Province that respondents who had menstrual hygiene practices in both categories amounted to 76.1% and less categories by 23.9% .

However, this study is not in line with the research conducted by Tarigan and Hassan (2013) in female teenagers at SMPN 141 South Jakarta, the proportion of good menstrual hygiene practices is lower, at 49.2% compared to less practice at 50.8%. This might be due to demographic, social and cultural differences. The Tarigan and Hassan study (2013) analyzed the practice of *menstrual hygiene* adolescentin formal school education at the level of junior high schools, while in this study analyzing Islamic boarding schools which have a culturalthe difference with ordinary formal schooling.

The difference in the results of this study may also be due to differences in various factors both internal and external. This is because basically practice is part of behavior. According to Holisticism (Humanism), practice is determined by intrinsic factors such as intention, motives, and determination. Therefore, the practice carried out by someone is determined by the motives, intentions or determination that exists in the individual (Nasdian, 2014).

### Believe in culture

The results of the study showed that the majority of respondents had a belief in the culture around menstruation that is equal to 56.6% compared to those who do not have trust of 43.4%. This is consistent with the research of Maharani and Andriyani (2018) that respondents who have more trust in menstrual culture (59.5%), compared to respondents who do not believe (40.5%).

There are many things that cause teens to believe in the culture and myths surrounding menstruation. Ariyani (2009) in her research on the biopsychosocial aspects of menstrual hygiene explained that the

reason adolescents believe in culture or myths related to menstruation is to follow parents' advice, myths that have a positive effect, be afraid of violating these myths and only follow what people tell.

**Interaction with Teachers**

The results of the study showed that the majority of respondents had interactions with teachers in the good category that is equal to 75.5% compared with respondents who had less interaction of 24.5%. This is in line with research conducted by Suryati (2012) at SMPN 2 Depok that respondents who have teacher support related to menstrual hygiene are higher (98.4%) compared to respondents who do not have teacher support (1.6%).

Based on a general description of the conditions in the study area, it showed that most of the respondents came from orphans, orphans, the poor and the poor. This causes respondents to make teachers as substitutes for their parents and information sources.

**Interaction with Peers**

The results showed that the majority of respondents had interactions with peers in the good category (75.5%) compared to respondents who had less interaction (24.5%). This is in line with research conducted by Suryati (2012) that respondents who received peer support related to menstruation were higher (86%) compared to respondents who did not get support (14%).

This is because respondents have an average age of 11-14 years so they are in early adolescence. At this time, very close friendships are bound by mutual interests, interests, and mutual help to help solve common problems. In this case adolescents often get approval (*approval*) and acceptance (*acceptance*) from their peers so that friends get priority attention (Sarwono, 2007).

**Eligibility of Sanitation**

The results of the study showed that the majority of respondents stated that sanitation was adequate (60.4%) compared to respondents who stated that it was not feasible (39.6%). This is consistent with Suryani's research (2019) at SMP Negeri 12 Kota Pekanbaru that most of the students at the SMPN (56.1%) stated that school infrastructure facilities that support hygiene practices during menstruation support compared to those who stated no (43.9%).

Most of the students stated that sanitation in the Minangkabau Village Islamic Boarding School was in a proper condition. This is not in accordance with the general observations made by researchers that the sanitary conditions in the Minangkabau Village Islamic Boarding School are inadequate. Researchers assume that this is due to the condition of the boarding school at the time of the study being in the stage of improvement so that the possibility of sanitation conditions in the boarding school has improved.

**Bivariate Analysis**

**Relationship of Trust in Culture with Youth Menstrual Hygiene Practices**

Statistical Test Results using the test *Chi-Square* showed a value of $p = 0.738$ ($p > 0.05$). Based on these results it can be concluded that there is no significant relationship between belief in culture withpractices for *menstrual hygiene* young women in the Minangkabau Village Boarding School in Padang. This study is in line with research conducted by Matta and Wuryaningsih (2014) at SMPN 87 South Jakarta, stating that there is no significant relationship between belief in culture andpractices, *menstrual hygiene* namely $p = 0.430$ ($p > 0.05$).

Based on the results of the study that respondents who have goodpractices *menstrual hygiene* are greater percentage coming from respondents who have confidence in menstrual culture. This causes an insignificant relationship between belief in culture withpractices *menstrual hygiene*. This research contradicts the research of Bujawati *et al.* (2017) at the Babul Khaer Islamic Boarding School in South Sulawesi, which shows that there is a significant relationship between belief in menstrual culture andpractices *menstrual hygiene* where the value of $p = 0{,}000$ ($p < 0.05$).

In social life, there are many cultures or myths that affect a person's behavior in daily life which are then accepted based on beliefs without any proof so that belief in a particular culture or myth influences a person's behavior (Notoatmodjo, 2007). Notoatmodjo's statement contradicts the results of this study because it turns out that although most respondents expressed confidence in culture, they still had goodpractices *menstrual hygiene* . Researchers assume this because respondents receive reproductive health information but do not get information related to the truth of myths about menstruation. In addition it is not only belief in culture that influences *menstrual hygiene*. Many other factors affect *menstrual hygiene* such as knowledge, age, and family support (UNICEF, 2013).

**Relationship of Interaction with Teachers with Menstrual Hygiene Practices**

The results of statistical tests using the test *Chi-Square* showed a value of p = 0.432 (p> 0.05). Based on this it can be concluded that there is no significant relationship between interaction with teachers withpractices for *menstrual hygiene* young women in the Minangkabau Village Boarding School in Padang. This study is in line with research conducted by Fauziah (2014) at SMP MTS Negeri in the City of South Jakarta that there is no relationship between teacher support andpractices *menstrual hygiene* where the value of p = 0.797 (p> 0.05). The results of this study are also in line with the research of Yusuf and Budiono (2016) that there is no relationship between teacher support and the practice of *menstrual hygiene* genitalin mentally retarded SMPLB students in Semarang City.

The results of this study contradict the research of Sulistyoningrum (2013) that there is a relationship between teacher support and the reproductive hygiene behavior of Galuh Handayani Junior High School students, where the greater the teacher's support in school, the better the reproductive hygiene behavior of students.

Teenagers need to be given good information through parents, peers and teachers at school. This is due to the fact that the teacher is the first distributor or information provider at school, especially about the cleanliness of the reproductive organs during menstruation (Rahman & Rofika, 2014). In this study, teacher support did not significantly affectpractices *menstrual hygiene* adolescentbecause of the more frequent interactions of female students with housemothers. The interaction of students with teachers is only limited in the teaching and learning process in the classroom. According to research Rejaningsih (2004), information from teachers related to menstruation obtained by adolescents is usually only obtained when the teacher teaches in class, especially on biology and religion. In addition, female students spend more time with peers than teachers.

Even though this research shows that there is no relationship between teacher interaction withpractices *menstrual hygiene*, the teacher's role in providing information on reproductive health can be improved so that female students can behave in menstrual hygiene properly.

**Relationship of Interaction with Peers with Menstrual Hygiene Practices**

The results of statistical tests using the test *Chi-Square* showed a value of p = 0.017 (p <0.05). Based on this it can be concluded that there is a significant relationship between peer interaction withpractices of *menstrual hygiene* young women in Islamic boarding schools. This research is in line with the research of Bujawati *et al.* (2017) to 117 female students at the Babul Khaer Islamic Boarding School that there was a peer communication relationship with menstrual personal hygiene with a test result of p = 0.001.

The results of this study are also in accordance with the research of Saadah (1999) in SLTP 1 Bogor, which explains that peers are a reference group which is a reinforcing factor for the practice of menstrual hygiene. Middle school and MTsN are early adolescents at this stage, adolescents feel more comfortable close to their peers than parents. In addition this study is also in accordance with Green's (2005) theory which states that certain health behaviors are influenced by 3 factors: predisposing, supporting and reinforcing. One of the reinforcing factors that influence the practice of menstrual hygiene in this study is *peers* (peers).

The development of adolescent social life is characterized by increasing peer influence. Teenagers spend more time interacting with peers. Peers provide an important role for teens because they have the

same attitudes, interests, appearance and behavior. That is because communication with peers is more easily accepted than communication with parents or teachers (Desmita, 2009). This is in accordance with the conditions of female students in the Minangkabau Village Islamic Boarding School who interact with peers more than teachers or parents. The female students are in the same environment as their peers for a long time in the hostel so that the peers are the figures that most influence the behavior of the female students.

**Realtionship of Eligibility of Sanitation with Menstrual Hygiene Practices**

The results of statistical tests using the test *Chi-Square* showed a value of p = 0.017 (p <0.05). Based on this it can be concluded that there is a significant relationship between the feasibility of sanitation withpractices for *menstrual hygiene* young women in the Minangkabau Village Islamic Boarding School. This is in line with research conducted by Suryani (2019) at SMPN 12 Pekanbaru City that towards a significant relationship between facilities and the practice of menstrual hygiene with a value of p = 0,000.

Sanitation is a deliberate behavior in the culture of clean living with the aim of preventing humans from coming into direct contact with dirt so that it can maintain and improve human health such as the provision of clean water, sewage and rubbish, and others (Notoatmodjo, 2003). Sanitation is related to the completeness of facilities that can support teenage menstrual hygiene behavior. These facilities include the availability of water, soap and sanitary napkins and toilet conditions (Plan International and The SMERU Research Institute, 2019).

Green Theory (2005) states the enabling*factor*is a factor that allows individuals to change their behavior or environment. Enabling factors include the availability of facilities and infrastructure or facilities. This research is also in line with research conducted by Kitesha *et.al.* (2016) which revealed that there is a relationship between menstrual hygiene practices and facilities (*Water, Hygiene and Sanitation*).

Researchers assume there is a relationship between sanitation withpractices *menstrual hygiene* because one of the supporting factors in behaving is the means. It is impossible for young women to practice menstrual hygiene correctly if there are no means available such as clean water, toilets, soap and sanitary napkins.

## IV. CONCLUSION

33. Based on the results of research conducted, the following conclusions can be drawn:

1. Most young women have good menstrual hygiene practices
2. Most young women have a cultural trust
3. Most young women have interactions with teachers and peers in good categories
4. Most young women expressed sanitation
5. There is a significant relationship between interacting with peers in the practice of menstrual hygiene
6. There is a significant relationship between the feasibility of sanitation practices of menstrual hygiene
7. There is a significant relationship between the feasibility of sanitation practices of menstrual hygiene
8. There was no significant relationship between confidence in the cultural practices of *menstrual hygiene* teenage daughter
9. There was no significant relationship between interaction with teachers with the practice of *menstrual hygiene for* girls

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# THE EFFECT OF MOZART'S CLASSIC MUSIC ON POSTPARTUM BLUES PREVENTION IN POST-CESAREAN SECTION MOTHERS IN ARIFIN ACHMAD HOSPITAL OF PEKANBARU

**Siska Helina[1], Fatiyani Alyensi[1], Puspa Ayu Arum Pangesti[2]**
*[1]Midwifery Departement, Health Ministry of Politechnic Riau, Pekanbaru, Indonesia*
*[2] Applied Bachelor of Midwifery Program in midwifery department, Health Ministryof Politechnic Riau, Pekanbaru Indonesia*
siska@pkr.ac.id

**Abstract**

Postpartum blues is a disorder experienced by postpartum mothers, reaching 50-70% of all women in postpartum period. One of the alternatives given to postpartum mothers is by providing relaxation therapy using Mozart's classical music (MCM). This study aimed to determine the effect of MCM in the prevention of postpartum blues in post-secarean section (SC) at ArifinAchmad Hospital in 2019. This quasy experiment used pretest-posttest with control group study design. The samples were 30 postpartum mothers devided into two, each 15 people for the intervention group and the control group with sample selection using the purposive sampling method. The research instrument was the EPDS questionnaire to assess the psychological condition of the mother before and after the intervention. The statistical test used the dependent t-test with a significance level of 95%. The results showed that the average EPDS score for mothers who were not and were given Mozart's classical music was 8.93 ± 1.75 to 6.80 ± 1.37 and 10.13 ± 2.32 to 4.47 ± 1.59, respectively. Therefore, there was an influence of MCM on prevention of postpartum blues with a p value of 0.000 ($p < 0.05$). It is expected that midwives should know the effectiveness of MCM as a non-pharmacological method in preventing postpartum blues.

**Keywords** : Postpartum Blues, Classical Music, Mozart

## INTRODUCTION

Postpartum period is a process of adaptation experienced by mothers and families due to various changes that occur both physically, psychologically and family structure that requires time to adjust. (Murray & McKinney,2007). A Postpartum mother will experience several physiological adaptations and psychological adaptations. The physiological adaptation process includes changes in vital signs, hematology, cardiovascular system, urination, digestion, the musculoskeletal system, endocrine system and reproductive organs. Meanwhile the psychological adaptation process of parents to their role includes three adjustment phases known as the dependent phase (taking in), the dependent-independent phase (taking hold), and the interdependent phase (letting go) (Pilitteri,2007; Bobak et al.,2005).

Some mothers succeed through a process of self-adaptation well, but some others do not succeed through it so they experience a psychological disorder known as Postpartum Blues. Postpartum blues is a disorder experienced by postpartum mothers due to the mother's inability to make adjustments to the birth of her baby, which is usually evident on the first day until the fourteenth day after labor and reach its peak on the fifth day by showing some symptoms including of mild depression such as crying easily, feeling full of responsibility, fatigue, unstable mood swings and lack of concentration. In addition, mothers will become irritable and experience eating and sleep disorders (Perry et al, 2010).

The occurrence rate of post-partum blues in Asia is quite high ranging from 26-85% while in Indonesia reaching 50-70% of all women in postpartum period (Fatimah et al,2012). The research conducted by Misrawati et al (2014) at ArifinAchmad Hospital in Pekanbaru found that 61.9% of Post Partum mothers are at risk of experiencing Post Partum Blues and 16.7% have Post Partum Blues. The cause of post-partum blues it is allegedly influenced by hormonal factors, demographics, pregnancy and childbirth experiences, psychosocial background, family support and anxiety (Nirwana, 2011). Besides

being caused by hormonal changes, the type of labor experienced is also one of the factors causing external to the occurrence of Postpartum Blues.

Research conducted by Dirksen and Andriansen shows that the use of some medical technologies (such as Caeserea and Episiotomy) in labor can lead to Postpartum Blues (Mariati& Wahyuni,2011). Labor with Sectio Caesarea can cause concern in postpartum mothers such as recovery time with the Sectio Caesarea method can take longer than normal labor, the mother does not have her Golden Hours with her baby, and subsequent pregnancies will be at high risk. If the postpartum blues is not treated seriously, it will develop into postpartum depression and the most severe conditions can be postpartum psychosis. Postpartum blues often cause interruption of mother and child interaction, and interfere with the attention and guidance that babies need to develop properly (Ishikawa et al.,2011).

One of the ways to prevent post partum depression or post partum psychosis is to provide good treatment during postpartum mothers. There are several alternative therapies that can prevent postpartum blues and these can be done throughout the childbearing period such as psychoeducational therapy, biofeedback therapy, massage therapy, relaxation therapy and music therapy. One of the alternative therapies mentioned is relaxation therapy which can make someone become more relaxed (Djohan,2006). This type of therapy consists of yoga, meditation, music and massage. Massage therapy can be used to reduce stress but not to deal with depression, while yoga therapy, meditation and music can reduce depression. (Gayle & Zieman,2005).

Music therapy has a good influence because it is universal which gives a sense of comfort and entertainment. The music will suppress the release of epinephrine, norepinephrine, and dopamine. This hormone are a stress hormone. Mental problems such as stress decrease, and calm increase so that it causes a person to relax (Marni,2014). From several studies on the influence of various types of classical music, many of the researchers advocate Mozart's classical music because mozart classical music is one type of music that has extraordinary magnitude in the development of health science. When compared to other classical music, melody and high frequency in classical music mozart able to stimulate and empower creativity and motivation in the brain. (Dofi,2010; Sari & Adilatri,2012).

The use of EPDS is still not widely applied by midwives in providing care for postpartum mothers especially in Post sectio caesarean mothers. Many health practitioners assume that in the puerperium there will always be physiological things, so they ignore the possibility of problems/complications that will occur. In fact, one of the many possible problems that can occur during the puerperium is a psychological problem. Therefore it is very important to implement the use of EPDS so that health workers can detect early signs that lead to Postpartum Blues in mothers so that they can provide treatment/therapy quickly and appropriately. The incidence of postpartum blues in Indonesia is still not widely documented in hospitals. Therefore it is necessary to apply EPDS to every puerperal mother. Besides being easy to apply EPDS is also it can makes us as a early detection tool that is closely related to the role of the Midwife.

ArifinAchmad Hospital is a Referral Hospital for all Regencies/Cities of Riau Province. The incidence of Caesarean Sectio at ArifinAchmad Regional Hospital in Riau Province was quite high in 2015 with 662 people, in 2016 as many as 579 people and in 2017 there were 524 people. Based on preliminary studies conducted by researchers on December 17, 2018 in Camar Room I of ArifinAchmad Hospital through the EPDS Questionnaire, it was found that 3 out of 5 postpartum caesarean mothers had EPDS scores leading to postpartum blues. Based on this, researchers are interested in conducting research on the Effect of Mozart Classical Music on Prevention of Postpartum Blues on Post Sectio Caesarea Women in ArifinAchmad Hospital in Riau Province.

## I. METHODS

This quasy experiment used pretest-posttest with control group study design involving two groups.The population of this research was all postpartum mothers who had gone through Caesarean Sectio in Camar I Room at ArifinAchmad Hospital Pekanbaru. The samples were 30 postpartum mothers devided into two, each 15 people for the intervention group and the control group with sample

selection using the purposive sampling method and fulfilled the inclusion criteria, which was Age >19 years to 35 years, Postpartum Mother with Sectio Caesarea 8-12 hours, did not have hearing disorder, can speak Indonesian, and Mother without certain diseases.

The data collection method was measured by EPDS questionnaire obtained directly from respondents who are the objects in this study on day 1 and day 3. Music therapy is given on day 1 post partum once a day until day 3 postpartum using Headphones and MP3 Players for ± 30 minutes. On day 3, post partum blues symptoms were measured again using the EPDS questionnaire. The research instrument was the EPDS (Edinburgh Postnatal Depression Scale) questionnaire that had been tested for validity and reliability. Processing and analysis of data using computerization (SPSS). The statistical test used the dependent t-test with a significance level of 95%.

## II. RESULTS

Based on the results of research from 30 respondents who have been conducted from January to March 2019, the results are:

**Table 1. Average EPDS Scores on Postpartum Caesarean Post-Sectio Mother Before and After Without Mozart Classical Music Therapy at ArifinAchmad Hospital Pekanbaru.**

| Treatment | Variabel | N | *Mean* | *SD* | *CI (95%)* | |
|---|---|---|---|---|---|---|
| | | | | | *Low* | *Up* |
| **Control** | Pretest | 15 | 8.93 | 1.751 | 7.96 | 9.90 |
| | Posttest | 15 | 6.80 | 1.373 | 6.04 | 7.56 |

Table 1 shows that the average EPDS score in the Postpartum Caesarean Mother Postpartum group without being given Mozart Classical Music Therapy was 8.93 ± 1,751 to 6.80 ± 1,373.

**Table 2. Average EPDS Scores in Postpartum Caesarea Postpartum Women Before and After Giving Mozart Classical Music Therapy at ArifinAchmad Hospital Pekanbaru**

| Treatment | Variabel | N | *Mean* | *SD* | *CI (95%)* | |
|---|---|---|---|---|---|---|
| | | | | | *Low* | *Up* |
| **Intervences** | Pretest | 15 | 10.13 | 2.32 | 8.85 | 11.42 |
| | Posttest | 15 | 4.47 | 1.59 | 3.58 | 5.35 |

Table 5.2 shows that the average EPDS score in the Postpartum Caesarean Postpartum mother group before being given Mozart Classical Music Therapy is 10.13 ± 2,326 and after being treated it is 4.47 ± 1.598.

**Table 3. The Difference in Average EPDS Scores after Intervention on Postpartum Caesarea Postpartum Mother who was given Mozart Classical Music with No Mozart Classical Music given at ArifinAchmad Hospital January - March 2019.**

| Treatment | N | *Mean Rank* | *SD* | 95 % CI | | *P Value* |
|---|---|---|---|---|---|---|
| | | | | Low | Up | |
| **Control** | 15 | 6.80 | 1.06 | 1.546 | 2.720 | 0.000 |
| **Intervences** | 15 | 4.47 | 1.67 | 4.738 | 6.595 | 0.000 |

Table 3 shows that from 15 Caesarean Postpartum mothers who were not given Mozart Classical Music had a higher mean rank of 6.80 compared to Caesarean Postpartum Mother with given Mozart Classical Music which was 4.47, which means that the average decrease in EPDS score of Postpartum Mother Post

Sectio Caesarea that has been given Mozart's Classical Music treatment is higher than the Postpartum Mother Sectio Caesarea who has not been given Mozart's Classical Music. The results of the Statistical Test found that the treatment of Mozart classical music therapy is effective on Prevention of Postpartum Blues with p value = 0,000 (p <0.05).

## III. DISCUSSION

### The average EPDS score on Post Sectio Caesarea mothers who were not given Mozart Classical Music

Based on the results of this research, it is shown that of 15 post-Caesarean mothers who were not given Mozart classical music results which can be seen in table 5.1 shows the average decrease in EPDS scores from 8.93±1.75 to 6.80±1.37.

The results of this study are in accordance with research conducted by Ike (2015) states that the average EPDS score in mothers who were not given Mozart Classical Music has decreased from 11.00 to 7.80. This goes in line with the research entitled "Effectiveness of music therapy on prevention of post partum blues" by Manurung, et al (2011) which states that the average EPDS score of mothers who are not given classical music is 14.00 and mothers who are not given classical music have a risk postpartum blues 7 times compared to the intervention group.

The average EPDS score which is quite high in the Control Group shows that Post Sectio Caesarean mothers tend to experience Postpartum Blues. Research conducted by Machmudah, et al (2012) explains that the possibility of postpartum depression occurs in respondents who experience labor with complications is 53.7% and 46.3% for respondents who gave birth normally. The results of other studies submitted by Ibrahim, et al (2012) also show that postpartum blues mostly occur in the type of pathological birth (caesaria) as many as 14 respondents (46.7%), whereas in physiological birth (normal) only amounts to 1 respondent (2,2%).

A decrease in EPDS scores in the control group showed that there were differences in the mean EPDS scores of post partum blues symptoms before and after. This is in line with Reeder et al. (2011), which explains that post partum blues is a temporary depression (related to hormones) that starts on the second or third day after delivery and usually disappears within 1 to 2 weeks, although some women experience mild depression for a longer period of time. Nirwana (2011) explains that after a few weeks or months later if not treated properly it can develop into a more severe disorder called Postpartum Depression.

This is certainly can be a difficult and unpleasant problem for those who experience it. Postpartum depression can turn into postpartum psychosis which has more severe symptoms because the mother who experiences it will begin to experience hallucinations, thoughts of suicide, or even try to endanger her baby.

### The average EPDS score on Post Sectio Caesarea mothers given Mozart Classical Music

Based on the results of this research, it is shown that of 15 post-sectio caesarean mothers given Mozart classical music, the results can be seen in table 5.2 showing the average decrease in EPDS scores from 10.13±2.32 to 4.47±1.59.

The results of this study are goes in line with research entitled "The effect of listening to music on postpartum stress and anxiety levels" by Ying Fen et al (2011) states that the provision of music therapy can reduce stress levels and postpartum maternal anxiety. Another research by Ike (2015) also showed data that there was a significant reduction in symptoms of postpartum blues by 5.87 points with a p value of 0,000 (p <0.05).

A decrease in the EPDS score of 5.56 shows that giving Mozart classical music can provide calm and stimulate the release of brain waves known as α waves that have a frequency of 8-12 cps (cycles per second). When the α waves are released the brain produces serotonin which helps maintain feelings of happiness and helps maintain mood, by helping to sleep, feeling calm and releasing endorphin hormones

that cause a person to feel comfortable, calm, and euphoria (Aizid, 2011) and decrease Adrenal Corticotrophin Hormone (ACTH) which is known as a stress hormone (Djohan, 2006).

Classical music is one type of music that appeared 250 years ago and was created by Wolfgang Amadens Mozart. Compared to other music, melody and high frequency in classical music Mozart is able to stimulate and empower one's creativity and can provide calm, encourage, influence feelings and emotions (Lidyansyah, 2014).

During the study, the mother admitted that her mind became calm, relaxed, her anxiety was reduced, and her sleep quality improved. So it can be concluded that the provision of Mozart's classical music intervention can make a person feel relaxed, provide security and prosperity, release happiness and sadness, relieve pain and reduce stress levels, and reduce anxiety.

**Effect of Mozart Classical Music on Postpartum Blues Prevention**

In this study there is an Effect of Mozart's classical music on postpartum blues prevention with p value = 0.000 ($p < 0.05$). This means that there is a significant influence between the average symptoms of post partum blues in the experimental group before and after Mozart's classical music therapy. It is known that in both the experimental and control groups there was a significant decrease between the pre-test and post-test EPDS scores. The decrease in the control group was 2.13 while the decrease in the intervention group was more that 5.56.

The results of this study are goes in line with what was done by Dewi (2018) with a p value ($p < 0.05$) stating that there was a significant decrease in postpartum blues symptoms. This research is in accordance with the theory in the book by Musbikin (2009) which states that classical music has the function of calming the mind and emotional cartasis and can optimize the tempo, rhythm, melody and harmony that produces alpha waves, and beta waves in the eardrum so as to provide calm make the brain ready to receive new input, relax effects, and sleep.

Mozart's classical music has advantages in terms of the purity and simplicity of the sound it produces. Rhythm, melody, and high frequency in Mozart's classical music can stimulate and empower the creative and motivational parts of the brain that are in accordance with the patterns of human brain cells. In addition, Mozart's classical music can also provide calm, improve spatial perception and allow patients to communicate well through the heart or mind. Mozart's classical music has distinctive effects that are not possessed by other composers, such as the powers that liberate, heal, and eliminate (Takahashi et al, 2014).

In this study it was found that some babies of mothers who gave birth with Caesarean Sectio were not Rooming In with their mothers due to the unstable baby's health condition. From 30 research samples, it was found that 10 mothers whose babies were treated in the Perinatology room had an average decrease in EPDS Score of ±12.3 to ±6 in the Intervention Group and ±10.2 to ±7.5 in the Control Group. This is goes in line with research conducted by Noor (2014) which states that Mothers of their babies at the NICU have a greater risk of experiencing various difficulties such as stress, difficult family relationships and financial problems compared to mothers of babies who are not in NICU.

Vigod et al (2010) stated that mothers of babies treated at NICU were 40% more likely to experience Postpartum Depression. Some literature states that the psychological condition of the mother of the baby treated at the NICU will be risk of experiencing Postpartum Depression ranging from 20% to 70% (Mounts,2009). Other research conducted by Nirwana (2011) states that one factor that is suspected to cause Postpartum Blues is the Hormonal Factor. In her study states that during the Taking-In Phase (24 hours after childbirth) there is a drastic decrease in the Estrogen and Progesterone Hormones to the state before pregnancy. These sudden hormonal changes can cause depression.

During the Taking In period, mothers are generally passive and have a dependency so that they fully surrender to others for their needs. The mother is more focused on her own needs so that she cannot initiate early contact with her baby well besides the fatigue and wound pain after childbirth by means of Caesarean Sectio can also trigger Postpartum Blues caused by the physical condition of the mother who is

still vulnerable and has not recovered. At this time the role of Health Workers is needed in order to always accompany and help meet the needs of mothers such as in order to detect and prevent bleeding during childbirth, provide counseling to mothers and families on how to prevent bleeding, help mothers make early breastfeeding along with bonding attachments and always keep the baby warm by preventing hypothermia.

Susanha (2016) states that during the Hold Hold period (3-10 after giving birth) the focus is more on babies and baby care. Postpartum mothers will focus on giving milk to babies and taking care of their physical needs and the baby's. Postpartum Blues can occur 24 hours after delivery or the next few weeks so it can be difficult for mothers to care for their babies during Taking Hold due to feeling depressed, unable to care for their babies and overwhelmed. Good postpartum care can be done such as monitoring the mother's condition for signs of Postpartum Blues by giving EPDS Questionnaires accompanied by providing Alternative Therapies such as giving classical music to the Mother which can make the mother's mood to be good and calm.

In this study, post-sectiocaesarea mothers given Mozart classical music had lower EPDS scores, which made mothers more relaxed, feeling safe, happy, releasing pain and reducing stress levels, which can cause a decrease in anxiety.

## IV. CONCLUSIONS

Based on research that has been done, the conclusion is:

a. The average EPDS score before and after giving Mozart Classical Music to Postpartum Caesarea Postpartum Mother at ArifinAchmadPekanbaru Hospital was 10.13±2.23 and 4.47±1.59.
b. The average EPDS score in the control group was 6.80±1.06 and in the intervention group it was 4.47±1.67

There is an effect of giving Mozart Classical Music to the prevention of postpartum blues in Post Sectio Caesarean mothers with p value 0,000 <α 0.05.

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# RELATIONSHIP OF SEX EDUCATION FROM PARENTS AND TEACHERS ON SEX KNOWLEDGE IN STUDENTS WITH INTERMEDIATED DISORDERS IN SLB PADANG CITY

**Laila Rahmi[1], Yola Yulita[2], Sunesni[3]**

[1]*Prodi S1 Midwifery FK UNAND, Jln. Niaga no. 56 Kota Padang, 25127, Indonesia*

[2] *Prodi S1 Midwifery FK UNAND, Jln. Niaga no. 56 Kota Padang, 25127, Indonesia*

[3] *Prodi S1 Midwifery FK UNAND, Jln. Niaga no. 56 Kota Padang,, 25127,Indonesia*

lailarahmi@med.unand.ac.id[1]

**Abstract**

The rise of cases of sexual violence in the form of child sexual abuse requires parents and teachers to increase their role in the supervision of their children. Groups of people with disabilities, especially children with intellectual impairments, are considered more vulnerable to sexual harassment. data found that more than 70% of children with special needs have fallen victim to various forms of abuse. This study aims to determine the relationship of sex education from parents and teachers to sex knowledge among female students with mental retardation disorders in SLB Kota Padang. Quantitative research withdesign*cross sectional*, conducted in SLB Negeri 1 Padang, SLB Negeri 2 Padang, and SLB WacanaAsih Padang from January 2019 to September 2019. The research respondents were female students with mental retardation disorders of 30 respondents. The research instrument used was a questionnaire. Univariate and bivariate data analysis usinganalysis*chi-square* ($p < 0.05$). The results showed 53.3% of respondents included in the category of having less knowledge. The bivariate results obtained were sex education from parents ($p = 0.001$), sex education from teachers ($p = 0.001$) on sex knowledge among girls with intellectual impairments in SLB Negeri 1 Padang, SLB Negeri 2 Padang, and SLB WacanaAsih Padang. There is a significant relationship between sex education from parents, sex education from teachers to sex knowledge among female students with mental retardation disorders in SLB Negeri 1 Padang, SLB Negeri 2 Padang, and SLB WacanaAsih Padang. It is hoped that the school will work together with health workers to provide health education about sex education to students with mental retardation disorders in the form of counseling to school once a month, and teachers can provide sex education in class, and the role of parents in providing sex education at home is further enhanced again.

## 1. INTRODUCTION

The rise of cases of sexual violence in the form of child sexual abuse committed byirresponsible elements requires parents and teachers to increase their role in their children's supervision. Not only

occurs in normal children, sexual abuse also often occurs in children with special needs or disabilities, especially children with mental retardation. According to the *World Health Organization* (WHO) disability is a loss or abnormality in terms of psychological, physiological, or loss of anatomical structure or function. This abnormality is usually referred to as disability or disability. Whereas the other words of retarded mental retardation*(mentalretardation)*,which shall mean mental retardation. Other terms for those who experience mental retardation such as weakness of mind, mental disability, mental stupid, stupid, stupid, and so on (Mangunsong, 2014).

AlinHalimatussaddiah as Head of the Research Team of the Institute of Economic and Community Research Institute (LPEM) of the Faculty of Economics, University of Indonesia in 2016, the estimated number of people with disabilities in Indonesia was 12.15%. Those in the moderate category were 10.29% and the weight category were 1.87%. While for the prevalence of disability in provinces in Indonesia between 6.41% to 18.75%. The three provinces with the highest prevalence rates are West Sumatra, East Nusa Tenggara and South Sulawesi. The number of women with disabilities was more that 53.37%, while the remaining 46.63% were men.

Based on data from the Directorate of Special Schools Development Ministry National Education of the Republic of Indonesia in 2008 counseling specifically about health carried out by health workers was limited to counseling about personal hygiene such as washing hands with soap, brushing teeth, drugs and *Acquired Immune Deficiency Syndrome* (AIDS) ). According to a survey conducted by Baladerian, Coleman, & Stream (2012) in the *National Survey on Abuse with Disabilities*, it was found that more than 70% of children with special needs who participated in the survey reported that they had fallen victim to various forms of abuse. Then about 41.6% of them reported having been sexually abused.Groups of people with disabilities are considered morevulnerable to reproductive risks including sexual harassment.

According to Sari (2018) statistics show that 80% of women and 50% of men with disabilities, especially mentally retarded, experience sexual harassment before the age of 18. The high level of sexual harassment that occurs to women due to a system of values that positions women is a social creature that is weak and lower than men known as *second class citizens* , that is someone who must be controlled, enslaved and exploited (Sumera, 2013). Sex education for children with special needs seems to still rarely get attention among educators. Evidently the literature that discusses sex education comprehensively is still very minimal to be found, in fact it is almost nonexistent. Along with the lack of sex education for children with special needs, some of them tend to be easily manipulated so that they are often used as objects of sexual harassment and venting. This reality does not only happen in the country, every year 1400 children with special needs in the UK become victims of sexual abuse. Likewise, cases of sexual violence against persons with disabilities in the United States were stated 1.5 times more vulnerable to becoming sexual victims compared to the general public (www. Edukasi.Kompas.com).

Growth and physical development of retarded adolescents are the same as other normal adolescents, they also experience physical changes but do not understand about their development, especially those related to sexual organs. The phenomenon that often occurs in mentally retarded children, that they do not have enough knowledge to understand about sex, they do not have friends to share stories, do not get information about sexual education from parents because parents are less interested in providing an understanding of sexual education to children with intellectual disabilities. Children with intellectual disabilities are not able to get information that can be obtained from books, articles, and others due to the condition of their abilities. In addition, the provision of sex education materials has not been given to retarded children in school (Lucia, 2005).

The results of Emilia's study (2015) in SLB Negeri 1 Bantul through observation and interviews with 9 parents with mentallyretarded children, found as many as 55.5% said they did not provide sexual education because sexual education was considered still unfamiliar and not yet time to discuss it with children and 44 , 4% claimed to have provided sexual education even though children often forget what was taught because of impaired abilities that occur in cognitive. Utami Research (2015) in SLB Negeri 1 Bantul by observing students and interviewing teachers, found that 50% of mentally retarded students engaged in sexual behavior including kissing, hugging and holding sensitive parts of men and women. Based on these data it can be seen that sexual behavior in mentally retarded children is quite alarming and the importance of sex education for mentally retarded adolescents.

Data from the Education Office of the Province of West Sumatra in 2019 found that the number of SLBs in Padang City was 38 and the highest number of SLB students were SLB Negeri 1 Padang, SLB Negeri 2 Padang, and followed by SLB WacanaAsih Padang. There is no learning related to sex education in schools, there is only learning about the anatomy of the reproductive organs in natural science subjects, so the role of the teacher is still needed to provide sex education during the learning process to students with intellectual disabilities. Based on the background description above, the researcher is interested in examining how the relationship of sex education from parents and teachers to sex knowledge in students with mental retardation.

## METHODS

Type of research is analytic withdesign*cross-sectional.* Data was collected in SLB Negeri 1 Padang, SLB Negeri 2 Padang, and SLB WacanaAsih Padang. This research was conducted in January 2019 - October 2019. The population in this study were all students with retardation disorders. The number of samples of this study were 30 subjects.Sampling is done by total sampling technique. Data processing was performed bytest*Chi-Square* ($p < 0.05$) using SPSS software. In the process of collecting data the researcher was

assisted by several friends who had experience communicating with mentally retarded children called enumerators.

**RESULTS**

**Table 1. Characteristics**

| No | Characteristics | Frequency | Percentage (%) |
|---|---|---|---|
| **1** | **Age Schoolgirl** | | |
| | <15 years | 12 | 40.0> |
| | 15 years | 18 | 60.0 |
| **2** | **Classification Tunagrahita** | | |
| | Light | 19 | 63.3 |
| | Medium | 11 | 36.7 |
| **3** | **Transport** | | |
| | Motor | 18 | 60.0 |
| | Car | 12 | 40.0 |
| **4** | **Education** | | |
| | Primary / Junior Secondary | 7 | 23.3 |
| | High School | 9 | 30.0 |
| | Bachelor | 14 | 46.7 |
| **5** | **OccupationMothers** | | |
| | Non-Working | 14 | 46.7 |
| | Working | 16 | 53.3 |
| **6** | **Education** | | |
| | Primary / Junior | 7 | 13.3 |
| | High SchoolHigh School | 10 | 33 , 3 |
| | Bachelor | 13 | 43.4 |
| **7** | **Father's occupation does** | | |
| | not work permanently / Labor | 7 | 23.3 |
| | Self-employed | 11 | 36.7 |
| | Civil Servants | 12 | 40.0 |

Based on table 5.1 it is found that the most frequent age distribution of respondents is aged over 15 years totaling 18 people (60, 0%) and then the age below 15 years is 12 people (40.0%). The category of mental retardation students is light in number, 19 people (63.3%) and the next category is mental retardation, 11 people (36.7%). Vehicles for school students are using motorbikes totaling 18 people (60.0%) and the next is using cars totaling 12 people (40.0%). Most respondents'education is Bachelor, amounting to 14 people (46.7%). Most respondents' occupations in the work category were 16 people

(53.3%). Most of the respondents' father's education was Bachelor amounted to 13 people (43.3%). Most of the respondents' father's occupations were civil servants, amounting to 12 people (40.0%).

**Univariate Analysis**

**Table 2. Frequency Distribution of Sexual Knowledge of Students with Developmental Disabilities in SLB Padang CityStudents with Developmental**

| Knowledge of Sexual Development ofDeficiency | Frequency | Percentage (%) |
|---|---|---|
| Less | 16 | 53.3 |
| Good | 14 | 46.7 |
| **Total** | **30** | **100** |

From Table 2. It is known that there are 16 people ( 53.3%) students with intellectual disabilities have less knowledge about sex education.

**Table 3. Frequency Distribution of Sex Education of Parents of Students withDisabilities in SLB Padang City**

| DevelopmentalSex Education of Parents | Frequency | Percentage (%) |
|---|---|---|
| Less | 18 | 60.0 |
| Good | 12 | 40.0 |
| **Total** | **30** | **100** |

From table 3.it is known that there were 18 people (60.0%) students with mental retardation had sex education from parents who were lacking.

**Table 4. Frequency Distribution of Sex Education from Teachers to Students with Tunagrahit Disorders in SLB Padang City**

| Sex Education from Teachers | Frequency | Percentage (%) |
|---|---|---|
| Less | 17 | 56.7 |
| Good | 13 | 43.3 |
| **Total** | **30** | **100** |

From table 4.it is known that there are 17 people (56.7%) students with mental retardation who have lack of sex education from teachers.

**Bivariate Analysis**

**Table 5. Relationships Sex Education of Parents Against Sexual Knowledge on Students with Impaired Tunagrahita in SLB Padang**

| Educationof parents | Tunagrahita School girl Sex Knowledge | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Less | | Good | | | | |
| | | f% | | f% | | f% | |
| Less | 15 | 83.3 | 3 | 16 , 7 | 18 | 100.0 | |
| Good | 1 | 8.3 | 11 | 91.7 | 12 | 100.0 | 0.001 |
| **Total** | 16 | 53.3 | 14 | 46.7 | 30 | 100.0 | |

Table 5.shows the sex education of parents towards sex knowledge in students with intellectual impairments the most categorized as less is 83.3% and the good category is 8.3%. The statistical test results using thetest*chi-square* obtained p *value* = 0.001, it can be concluded that there is a relationship of sex education from parents to sex knowledge in students with mental retardation disorders in SLB Padang City.

**Table 6. Relationship of Sexual Education of Teachers to Sexual Knowledge of Students with Developmental Disabilities in SLB Padang City**

| Education from teachers | Knowledge of mentally retarded children | | | | Total | | *p-value* |
|---|---|---|---|---|---|---|---|
| | Not | | Good | | | | |
| | f | % | f | % | F | % | |
| Less | 15 | 88.2 | 2 | 11.8 | 17 | 100, 0 | 0,001 |
| Good | 1 | 7.7 | 12 | 92.3 | 13 | 100.0 | |
| **Total** | 16 | 53.3 | 14 | 46.7 | 30 | 100.0 | |

Table 6 shows the sex education of teachers towards students with a knowledge of sex at the most retarded disorders categorized less is numbered 88 , 2% and good category, amounting to 7.7%. The statistical test results using thetest*chi-square* obtained p *value* = 0.001, it can be concluded that there is a relationship of sex education from teachers to sex knowledge in students with mental retardation disorders in SLB Padang City.

## DISCUSSION

The results of univariate analysis of thedistributionfrequencyof respondents by age, in this study showed that the majority of respondents had age> 15. According to the Indonesian Ministry of Health (2015), age is grouped into 3, namely young age: <15 years, productive age: 15-64 years and old age: ≥ 65 years. Respondents who participated in this study were dominated by the productive age group, besides that the productive age group was suitable times to determine a life partner, marry and reproduce / produce children (Jahja, 2011).

Most respondents have parents with a high education level, namely diploma / bachelor graduates. School education level consists of primary, secondary, and higher education (Ihsan, 2011). Parents' occupation in this study showed that most mothers chose to work, namely 53.3% and fathers 76.7%. Parents' work greatly affects children's knowledge, because in line with the characteristics of research that parents (mothers and fathers) retarded female students more than 50% work, so that the time to provide sex education to children is less and less attention to their children's learning patterns at home. In a week of workers who worked more than 48 hours in 2014, the majority were male with 28.57% and women with 21.68% (Ritonga, 2015).

Based on the results of the study using univariate analysis showed knowledge of sex in children with mental retardation disorders in the category of less, namely the number of 16 people (53.3 %%) and good categories amounting to 14 people (46.7%). Factors affecting knowledge are age, education, occupation, environment and social culture (Wawan 2010). This is in line with research conducted by Islamiyatur (2015) that most teenage retarded adolescents do not yet have a comprehensive understanding of sexual health and reproductive health. factors that can influence someone's knowledge, namely education level, age, occupation, socioeconomic and information. the more information obtained the more clear the knowledge (Notoatmodjo, 2014).

Based on the results of research using univariate analysis shows the frequency distribution of sex education of parents in children with mental retardation disorders in the category of less that is as many as 18 people (60.0%), and good categories as many as 12 people (40.0%). Sexual education aims to provide understanding to children in equipping with sexual knowledge, giving direction to the meaning of noble love and knowing correct and beneficial habits (Nurgiatiningsih, 2010). In the family environment, especially parents, most do not provide sexual education to children because parents think that sex education is something that is considered taboo, difficult and not suitable for discussion with children. For providing sex education parents are more entrusted to teachers in schools (Nurlaili, 2011).

The results of this study indicate the distribution of sex education from teachers to children with mental retardation disorders in the category of less that is as many as 17 people (56.7%) and

good as many as 13 people (43.3%). The teacher's role is as a teacher, the teacher as a teacher's guide as a mediator, the teacher as an evaluator, and the teacher as a motivator, (Sadirman, 2011). The obstacle that causes the teacher's role is still not optimal, namely taboo culture, besides that, the teacher also still does not understand reproductive health (Kumalasari, 2012). As Upton (2012) argues "The role of teachers in introducing sex education can provide a child's understanding of the condition of his body, understanding of the opposite sex, andunderstanding to avoid sexual violence. Teachers as educators have an important role in sex education in schools, namely in the prevention of sex free (Purwati, 2013).

Bivariate analysis test results in this studyshows that sex education from parents to the knowledge of sex in female students with mental retardation is categorized as less, amounting to 83.3% and good categories, amounting to 8.3%. Statistical test results using thetest*chi-square* obtained p *value* = 0.001 which means there is a relationship of sex education from parents to sex knowledge in students with mental retardation disorders in Padang City SLB in 2019. According to Lestari and Prasetyo (2014)One factor that also influences parents' perceptions of sex education is the lack of information about sex education that makes parents misunderstand in interpreting the term sex education. In line with research from Putri (2012), there is a significant relationship between parental knowledge about sexual health and parental behavior in providing sex education to children (p = 0.005).

Bivariate analysis test results in this studyshows that sex education from teachers towards sex knowledge among female students with mental retardation is categorized as less, amounting to 88.2% and good categories totaling 7.7%. Statistical test results using thetest*chi-square* obtained p *value* = 0.001 which means there is a relationship of sex education from teachers to sex knowledge in students with mental retardation disorders in Padang City Special School 2019. In delivering sex education teachers have an important role according to Jannah (2016) namely the effort to teach, guide, provide understanding and awareness of sexual problems faced by students.

## CONCLUSION

Students with mental retardation disorders more than half (53.3%) have less knowledge about sex education, More than half (60.0%) students lack sex education from parents and More than half (56.7%) students with mental retardation disorders lack of sex education from teachers in SLB Padang City 2019. There is a significant relationship between sex education from parents of sex knowledge in students with mental retardation disorders in SLB Padang City 2019. There is a significant relationship between sex

education from teachers to knowledge sex in children with intellectual impairments in SLB Kota Padang 2019.

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# COMPARISON OF PHYSICAL ACTIVITY PROGRAMMES ON PAIN MENSTRUAL IN SUBJECTS WITH PRIMARY DYSMENORRHEA AT BACHELOR OF MIDWIFERY UNIVERSITAS ANDALAS

**Lusiana El Sinta Bustami [1], Aldina Ayunda Insani[2], Anisa Wahyuni[3]**

[1] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[2] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[3] *Bachelor of Midwifery Program, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
Lusianaelsintabustami@med.unand.ac.id[1]

**Abstract**

Dysmenorrhea is menstrual pain, and is one of the symptoms of gynecology. Many women feel uncomfortable or disturbed during menstruation. The term dysmenorrhea refers more to women whose menstrual pain can interfere with normal activities and require drugs, either over the counter or prescription drugs. Dysmenorrhea is divided into two: primary dysmenorrhea (not because of pathological state) and secondary dysmenorrhea (pathological state). Management of dysmenorrheal exists pharmacologically and nonpharmacologically, one of them is by doing physical exercise (aerobic exercise and stretching exercise). The purpose of this study was to compare the effectiveness of aerobic exercise and stretching exercise to pain intensity in subjects with menstrual pain ( primarydysmenorrhea).

The design of this study was descriptive analytic Quasi Experimental. Conducted in Bachelor of Midwifery, Universitas Andalas from December to January 2018 The subjects is midwifery students, and divided into 2 groups (32-group A, 32-group B). Data were collected using a questionnaire and Numerical Pain Rating Scale to assess pain intensity. Statistical analyzes were performed using paired t tests for group comparison and student t tests used to compare between the two groups with a p value of 0.05.

Results statistics showed no significant differences in the intensity of menstrual pain between the two groups and also based on bivariate analysis showed that there was no statistically significant difference in comparison of pain intensity between menstruation between two groups with p> 0,05.

**Keywords** : Dismenore, aerobik exercise, stretching exercise

## INTRODUCTION

Menstruation is a normal physiological uterine bleeding occurring under the influence of pituitary and ovarian hormones (Benson and Pernoll, 2009). Hormones that affect the menstrual cycle are female sex hormones estrogen and progesterone, these hormones cause physiological changes in the female body (Yulizawati, 2016). This physiological thing can be accompanied by pain, nausea, and emotional disturbance, one of the problems that women often experience during menstruation is menstrual pain, which can cause anxiety for some women, this pain is called dysmenorrhea (Proverawati,2009).

Dysmenorrhea is menstrual pain, and is one of the symptoms of gynecology. Dysmenorrhea is divided into two: primary dysmenorrhea (not because of pathological conditions) and secondary dysmenorrhea (presence of pathological conditions in the pelvic cavity) (Hacker and Moore's, 2010). Primary dysmenorrhea usually begins to occur about 6-12 months after *menarche*, beginning a few hours before or early in menstruation, most severely at the onset of menstrual events and slowly diminishing. Women who are at risk for dysmenorrhea are women with a family history of dysmenorrhea, young age (<30 years), early menarche (<12 years), low or high body mass index (<20 or> 30), nulliparas, smoking , and

psychological symptoms such as depression and anxiety (Berkley,2013).

Primary dysmenorrhea is very common, especially in adolescents, as many as 90% of young women and more than 50% of menstrual women worldwide report this incidence by 10-20% of those with moderate to severe pain (Berkley, 2013). The incidence of dysmenorrhea in Indonesia is 55% that occurs in women of age productive (Proverawati, 2009)..

Primary dymenorrhea is caused by prostaglandin production which leads to an increase in uterine activity, due to increased contraction and its frequency , (Hacker and Moore's, 2010). Some countries around 34- 50% of women are absent or absent at school or in work, and this is due to dysmenorrhea, so we can know that many of the impact that women experience as a result of dysmenorrhea (Anurogo,2011).

The effort taken to reduce dysmenorrhea in some women is by pharmacological or medicines, one of the drugs that is effective in dealing with primary dysmenorrhea is nonsteroid anti inflammatory drugs (NSAIDs ), but not all women can take this drug, even for women who can take these drugs is not fully effective (Berkley, 2013). The habit of taking drugs to overcome dysmenorrhea will have an impact on drug dependence (Anurogo, 2011). So we need a way to reduce dysmenorrhea without taking anymedication

One of them is to exercise regularly at least 30 minutes every day, such as: jogging, cycling, and gymnastics (Anurogo, 2011). Sports and exercise that affect the intensity of menstrual pain include aerobic exercise and stretching exercise, aerobic exercise and stretching exercise is an exercise that is included in physical activities or physical exercise (Department of Health,2012).

Based on the results of research conducted by Vaziri et al (2012) showed that aerobic exercise and stretching exercise effective in reducing dysmenorrhea and both types of exercise have the same effect on primary dysmenorrhea. Aerobic exercise also can causing the release of endorphin hormones in the brain which can increase the pain threshold by activating synthesis of prostaglandin inhibitor so it can reduce mind disruption, reduce short-term depression, improve concentration , improve mood and behavior ( Karampour and Khoshnam , 2012; Onur , 2012) .

Stretching exercise can also increase muscle strength, endurance and muscle flexibility so as to decrease dysmenorrhea, stretching exercise also affects the significant reduction of physical and psychological symtoms of primary dysmenorrhea. The exercise can reduce symptoms of dysmenorrhea such as lack of concentration, behavioral changes, breast pain and, anxiety, duration and intensity of pain (Karampour and Khoshnam, 2012). So, the purpose of this study is to find a more effective method in reducing the intensity of menstrual pain with primary dysmenorrhea.

Based on a preliminary study that researchers conducted on September 9-14, 2017 in Bachelor of Midwifery, Universitas Andalas. The first bachelor ofdegree, students were 46 people, among them 35 people had dysmenorrhea with mild symptoms and seven people had moderate symptoms, second level was 44 people, among them 11 people had dysmenorrhea with mild symptoms, 15 people experienced moderate symptoms. A third level was 50 people among them 38 people had dysmenorrhea with mild symptoms, 12 people had moderate symptoms, a fourth level of 42 people of whom 28 suffered from dysmenorrhea with mild symptoms and 14 people had moderate symptoms, a fifth level of 51 people including 38 people with dysmenorrhea with mild symptoms and 13 people experiencing symptoms medium.

Based on the background and preliminary study above, the researcher is interested to conductaresearch entitled "Comparison of Effect between Physical Exercise(Aerobic exercise and Stretching exercise) on Pain Intensity in Bachelor of Midwifery, Universitas Andalas Who Have Menstrual Pain".

## METHOD

This research is a quantitative research with *Quasi Experimental* study design. The subjects of this study were Bachelor of Midwifery, Universitas Andalas. The subjects divided into 2 groups (32-group A, 32-

group
B. Data werecollected using respondent characteristic questionnaires andNumerical Pain Rating Scale to assess pain intensity.)

## RESULTS

**Table 1. Frequency Distribution Characteristics Respondents By Age and Force**

| Variabel | Intervention: Group of *Aerobic Exercise* Interventions | | Intervention: Group *Stretching Exercise* | |
|---|---|---|---|---|
| | f | % | f | % |
| Age | | | | |
| Teenagers (17-20 years) | 23 | 71,9 | 26 | 81,3 |
| Early Adult (21-23 years) | 9 | 28,1 | 6 | 18,8 |
| Force | | | | |
| Force 13 | 4 | 12,5 | 4 | 12,5 |
| Force 14 | 2 | 6,3 | 2 | 6,3 |
| Force 15 | 10 | 31,3 | 9 | 28,1 |
| Force 16 | 5 | 15,6 | 12 | 37,5 |
| Force 17 | 11 | 34,4 | 5 | 15,6 |

Table 1 above shows that in the aerobic exercise intervention group most of the respondents are at the age of 17-20 years that is as much as 71.9% and a small percentage of respondents is the force of 2017 that is as much as 34.4%, while the intervention group stretching exercise majority of respondents are at the age of17-

20 years as much as 81.3% and a small percentage of respondents is the force of 2016 that is as much as37.5%.

**Tabel 2. Frequency Distribution of Pain Intensity Before and After Intervention AerobicExercise**

| Intensity of Pain in Aerobic Exercise | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variables | No Pain | | Mild Pain | | Medium Pain | | Controlled hight Pain | | Uncontrolled hight Pain | |
| | F | % | F | % | F | % | F | % | F | % |
| Before intervention | 0 | 0 | 6 | 18,8 | 26 | 81,3 | 0 | 0 | 0 | 0 |
| After intervention | 2 | 6,3 | 22 | 75 | 6 | 18,8 | 0 | 0 | 0 | 0 |

Table 2 above shows that in the *aerobic* group *exercise the* majority of respondents experienced moderate pain before getting intervention that is as much as 81.3% and after getting intervention most

respondents experience mild pain as much as 75%.

**Table 3 . Frequency Distribution of Pain Intensity Before and After Intervention StretchingExercise**

| Variables | No Pain | | Mild Pain | | Medium Pain | | Contr olled hight Pain | | Uncontr olled hight Pain | |
|---|---|---|---|---|---|---|---|---|---|---|
| | F | % | F | % | F | % | F | % | F | % |
| Before Intervention | 0 | 0 | 4 | 12,5 | 28 | 87,5 | 0 | 0 | 0 | 0 |
| After Intervention | 263 | | 21 | 65,6 | 9 | 281 | 0 | 0 | 0 | 0 |

Table 3 above shows that in the *stretching exercise* group the majority of respondents experienced moderate pain before getting intervention that is as much as 87.5% and after getting the intervention most of the respondents had mild pain as much as 65.6%.

**Table 4 Comparison of Pretest and Posttest Value Numeric Rating Scale in Aerobic ExerciseGroup**

| Variabel | Pre-test mean | SD | Post-test mean | SD | Mean SD | T-test | P value |
|---|---|---|---|---|---|---|---|
| Results *Numeric Rating Scale before and after the test* | 1,81 | 0,397 | 1,13 | 0,492. | 0,688 0,471 | 8,258 | <0,001 |

Tabel 4 above shows that the statistical test results obtained p value <0.001(p <0.05), it can be concluded that there is a significant difference based on the Numeric Rating Scale between the values before and after intervention in the aerobic exercise group.

**Tabel 5. Comparison of Pretest and Posttest Value Numeric Rating Scale in Stretching ExerciseGroup**

| Variabel | Pre-test mean | SD | Post-test mean | SD | Mean T test SD | P value |
|---|---|---|---|---|---|---|
| Results *Numeric Rating Scale before and after the test* | 1,88 | 0,336 | 1,22 | 0,553 | 0,656 0,483 | 7,693 <0,001 |

Tabel 5 above shows that the statistical test results obtained p value <0.001(*p <0.05). it* can be concluded that there is a significant difference based on theNumeric Rating Scale between the valuesbefore and after intervention in thestretching exercise group

**Tabel 6. Comparison of Pre-test and Post- test Value Numeric Rating Scale between Aerobic Exercise and Stretching Exercise Group**

| Variabel | *Aerobik* N (32) | | *Stretching* N (32) | | *P value* |
|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | |
| Before Intervention | 1,81 | 0,39 / | 1,88 | 0,336 | 0,536 |
| After Intervention | 1,43 | 0,49 2 | 1,22 | 0,555 | 0,500 |

Tabel 6 above shows that the statistical test results obtained nilap p= 0,536 (p> 0,05) for comparison of value of Numeric Rating Scale before intervention in both groups and for a comparison of the value of the Numeric Rating Scale after intervention in both groups obtained p= 0,500 (p> 0,05), it can be concluded that there is no significant difference based on Numeric Rating Scale between groups who received an aerobic exercise intervention with groups who received intervention stretching exercise to decrease the intensity of menstrualpain.

**DISCUSSION PainIntensity**

The results showed that in the aerobic

group exercise the majority of respondents experienced moderate pain before getting intervention that is as much as 81.3% and after getting intervention most respondents experience mild pain that is as much as 75%. In the stretching exercise group the majority of respondents experienced moderate pain before intervention was 87.5% and after getting intervention most of the respondents had mild pain as much as 65.6%.

Intensity of menstrual pain is divided into five levels, as no pain, mild pain, moderate pain, severe controlled pain and severe uncontrollable pain. Respondents were grouped at a no pain when the measurement scale of the pain was 0, grouped into mild pain when the measurement scale 1-3, grouped into moderate pain if the measurement scale was 4-6, grouped into controlled severe pain if the measurement scale was 7-9 and grouped into severe uncontrollable pain if the measurement scale is 10 (Fikriyah,2017).

Menstrual pain caused by the influence of prostaglandins, increase production of prostaglandins cause increase contraction of the uterine muscle so that will cause pain. When menstrual pain occurs thensome muscles become tense, and after physical exercisethenthemusclesthatwere previously resistant will be relaxed , so that the previous contraction of the excess will gradually diminish (Corwin, 2009).

The same study conducted by Ningsih (2011), showed the results of statistical tests with Chi-Square found that in the intervention group the proportion of pain intensity was mostly in mild pain that is equal to 78.1% and in the control group the proportion of pain intensity mostly found in severe pain is 90.6%. Value p value = 0.001, meaning that there is a significant difference in the proportion of pain intensity

after intervention. Research conducted by Rahmawati et al (2016) about the intensity of menstrual pain before and after anti- menstrual pain medication, obtained the results that some respondents experienced moderate pain before getting that intervention as much 43.2%, and after getting the intervention the majority of respondents did not experience pain as much as 91.9%.

The above research showed that the decrease of pain intensity after intervention, the intensity of pain in the respondents before getting intervention that some of the respondents had moderate pain and after getting intervention of respondents experienced decrease of pain intensity, even on the previous respondents who had moderate pain become painless after getting intervention. It can be concluded that the average respondent experienced decreased intensity of menstrual pain after getting intervention. The results of this study it has the same with the above research because it has the same research method and the same samplesize.

**Effect of Physical Exercise (Aerobic Exercise) on Intensity of Menstrual Pain**

The result of statistic test for the comparison of pretest and posttest value of Numeric Rating Scale in aerobic exercise group obtained P value <0,001 ( p value <0.05), so that it can be concluded that there is a significant difference based on the Numeric Rating Scale between the values before and after intervention in the aerobic exercise group .

Research that evaluated the effect of aerobic exercise on the intensity of menstrual pain among others is a study conducted by Kiranmayi (2016), the results of his research showed that the decrease in intensity of menstrual pain after done aerobic exercise. This is because there is an increase in metabolism and blood flow in the pelvic area that occurs during exercise so that it affects menstrual pain, and also its statistical show that the intensity of pain measured by the scale of the pain then shows a decrease after intervention.

Based on research Mahvash et al (2012) also showed that physical exercise is influential in reducing pain during menstruation. Women who experience menstrual pain are recommended to do this exercise, because with this exercise can reduce the perceived negative impact and arise during menstrual pain, such as the disruption to academic, social life and personal life. The research conducted by Mahvash et al (2012) is the same with the research by Rahmawati et al (2016) that is about the effect of anti menstrual pain medicinal on the intensity of menstrual pain in the dormitory of mu'alimat Surakarta, there is result of calculation by using Wilcoxon statistic test obtained significancy value p value <0.001 (p <0,05) this it can be concluded that there is a significant effect between menstrual anti-menstrual pain on the intensity of menstrual pain.

Menstrual pain is caused by the influence of prostaglandins, which causes the uterine muscles to contract so that the blood vessels undergo vasoconstriction and eventually the blood supply to the endometrium will decrease so this is what causes the pain. Exercise is done continuously can increase the hormone endorphins, which work as neurotransmitters in the brain to reduce the distribution and perception of pain. The hormone endorphins are excreted by the hypofise gland in response to exercise performed (Corwin, 2009).

Other effects that occur from the exercise is the occurrence of physiological changes that almost occur in every system of the body. Exercise provide a good influence on the various systems that work in the body one of which is the cardiovascular system, which with regular exercise will make the heart stronger and can pump and channel more blood throughout the body. Blood flow will be smooth so that menstrual pain will be reduced (Anurogo,2011).

The samestudy was conducted in SMUN 2 Sumenep about the effectiveness of gymnastics on the intensity of menstrual pain with the method of one group pretest post test design, obtained value p <0.001 (p< 0.05) which means effective administration to reduce dysmenorrheal (Suparto, 2011). Exercises have been shown to increase b- endorphin levels four to five times in the blood, so more often the higher b-endorphin levels will be. B- endorphin serves to regulate the emotions and increase b-endorphin proven to be closely related to the decrease of pain, so that gymnastics is effective

inreducing pain problems especially painful menstruation (Harry, 2007).

This research it has the same with research by Afita (2014) is about the influence of low impact aerobic exercise against dysmenorrhea, which consists of the control group and the intervention group. In the control group did not show a decrease in dysmenorrhea while in the intervention group decreased dysmenorrhea, so it can be concluded that with the low aerobic exercise impact very effective to lower dysmenorrhea primary. This is the way with Laili (2012) study that examined the difference of pain level between before and after gymnastics of dysmenorrhea in adolescent girls in SMA 02 Jember, the result of its analysis obtained p< 0,00 1 (p <0,05) significant differences in the level of menstrual pain between before and after gymnastics dysmenorrhea.

Other research is conducted by Haryanti and Kurniawati (2017) which is about the relationship of aerobic exercise frequency with the incidence of dysmenorrhea. The results showed that there was a significant relationship between aerobic exercise frequency and dysmenorrhea incidence on young women at Aerobic Syariah Surakarta. Based on the theory, exercise can increase blood supply to the reproductive organs so as to accelerate blood circulation. Exercise regularly such as brisk walking, jogging, running, swimming, cycling can improve general health and exercise as well can reduce stress because it can increase the production of endorphins in the brain, the natural painkiller body (Proverawati ,2009).

In contrast to a study conducted by Blakey et al (2010) who conducted a study to determine whether there is an association of exercise on menstrual pain in women, conducted on 594 students using a questionnaire and obtained the result that there is no relationship between exercise with menstrual pain. The results of the above study it has the same with the research conducted by Anissa et al (2015) which in his study showed that bivariate analysis test using chi-square test obtained p = 0.117 (p> 0,05), which means there is no significant (significant) relationship between exercise habits with degrees of dysmenorrhea.

The difference of the results obtained in the above research is located on the sample size in the study. The number of samples from the above study is more than 500 people which means the sample size is large enough, the number of samples that are too large in a study will affect the results of the study, because the number of samples that are too much in the study can lead to greater bias as well. In studies with a small number of samples or with a smaller number (<500 people) showed a positiveresult.

Other factors caused by different research methods used, in the study using chi-square method so that the duration, frequency, and intensity of the sport are not clearly measured, whereas those who use semi experimental or quasi experimental methods shows a positive result because the duration, frequency, and intensity of the sport can be measured clearly. So it takes a small sample size and not too smallin

research and using research methods that can measure the duration, frequency, and intensity of the sport clearly so that the results obtained more accurate.

The most difficult problem in this study is in determining when the respondent will experience menstruation in the next cycle that will be done before intervention, because in some cases some respondents experience decline and even the advancement time comes menstruation, this is influenced because the respondents in the majority of research under age 20 years old, who at that age most women are still not balancedhormonally.

**Effect of Physical Exercise (Stretching Exercise) on Intensity of Menstrual Pain**

Based on the results of this study found that physical exercise stretching exercise proved effective in reducing the intensity of menstrual pain. Statistical test results for comparison of pretest and posttest Numeric Rating Scale values in the stretching intervention group exercise obtained value

0.001 ( p value <0.05) so it can be concluded that there is no difference in the intensity of menstrual pain that is felt in both groups both before and afterintervention.

Stretching exercise has also been shown to cause a significant reduction in psychological and physical

symptoms of primary dysmenorrhea. Stretching exercise can reduce the symptoms of dysmenorrhea such as lack of concentration, behavioral changes, breast pain, anxiety, duration and intensity of pain (Karampour and Khoshnam, 2012). Based on the health literature that exercise is effective in reducing menstrual pain in women and also has an effect on treating PMS (Premenstrual Syndrome ) (Ghanbari et al, 2008 ).

Two randomized clinical trials showed that stretching exercise was effective in reducing the intensity of pain in primary dysmenorrhea. The study concluded that exercise can regularly decrease the intensity of menstrual pain in dysmenorrhoea due to the occurrence of hormonal changes in uterine epithelial tissue orincreased ndorphins. Based on the results of this study can be concluded that with stretching exercise regularly then the exercise effectively reduces dysmenorrhea (Shahr, 2012).

Research conducted by Hagey (2008) showed that by doing stretching exercise, then the exercise effective in reducing menstrual pain. Stretching exercise performed for 12 weeks on a regular basis, it can cause a significant decrease both in physical and psychological symptoms experienced by women during menstrual pain. such as concentration disorders, behavioral changes, breast tenderness, inflammation and anxiety. The study also showed that menstrual pain is less common in female athletes who have started their physical exercise before puberty than women who are not athletes.

Regular physical exercise has been regarded as one of the most effective methods for preventing and overcoming menstrual pain, as well as physical exercise has been considered as an anti-pain which can reduce menstrual pain and also sterss (Mastrangelo, 2007). A study comparing the effect of mefenamic acid intake with streching exercise on the intensity of menstrual pain, it was found that stretching exercise effect on the decrease of menstrual pain as well as the influence of mefenamic acid and its effect will increase with time and if done regularly (Motahari, 2017). The above study is in line with the Abbaspour et al (2006) study comparing the effect of exercise with sedation on menstrual pain, and the result that exercise is effective in reducing menstrual pain after being compared with sedatives for three to four menstrualcycles.

Menstrual pain is caused by excessive production of prostaglandins, and menstrual pain is more common in women who have more pressure or stress so that by doing stretching exercise can reduce stress in women (Chung et al, 2005). Stretching exercise can reduce the activity of the sympathetic system and affect the levels of steroid hormones in the blood circulation of women, but also increases levels of endorphin hormone that can cause increased pain threshold. The activity of this sympathetic system may increase because stress will affect the increase in uterine muscle contraction, thus increasing the symptoms of PMS (Premenstrual Syndrome ) and by exercise can reduce the activity of the sympathetic system, resulting in decreased symptoms of dysmenorrhea (Vaziri et al, 2012).

Another related study was conducted by Ningsih (2011) about the effectiveness of the packet of the reliever (stretching exercise and white water therapy) to the intensity of menstrual pain in SMAN Kecamatan Curup. The results showed that the relief package consisting of stretching exercise and water therapy was effective against decreased intensity of menstrual pain. Stretching exercise can increase the toto's strength, endurance and muscle flexibility so as to decrease dysmenorrhea (Karampour and Khoshnam , 2012).

This is different from the research conducted by Latthe et al (2006) who conducted observational meta-analysis research and obtained the results that exercise is not too influential on menstrual pain. Other studies found poor correlation or no relationship between physical activity and dysmenorrhea (Rezfani, 2013). A previous study on a group of women who did exercise reported a 30% increase in dysmenorrhea cases (Shavandi et al, 2009) .

Stretching exercise has been proven effective in reducing menstrual pain because it has some hormonal effects and that must be considered is in terms of implementation, which is done regularly so effective in reducing menstrual pain. Some of the above research which have different result with this research is because the research method used is different, the above research using observational method so that the result is negative, while the research shows the positive result using quasi experimental. Other

factors are also influenced by the type of exercise performed, the type of exercise is quite heavy even show negativeresults and otherwise exercise is not too heavy as stertching exercise showed a positive result.

In addition to that need to be considered for the exercise to give an effective effect then in the implementation of the intervention needed seriousness and seriousness of respondents in performing every gymnastics movements, because if done with not really it will be able to reduce its effectiveness. In addition, respondents are also expected to provide time in implementing interventions so that interventions can be undertaken on a regular basis.

**Comparison of the Effects of Physical Exercise (Aerobic Exercise and Stretching Exercise) on Intensity of Menstrual Pain**

This study focuses on the comparison of the effect of physical exercise (aerobic exercise and stretching exercise) on the decrease of pain intensity in Students of S1 Study Program in Midwifery FK Unand who experienced menstrual pain, comparing the pretest values between the two groups and also the posttest value of both groups and test results statistics show that p value> 0.05, it can be concluded that there is no significant difference based on Numeric Rating Scale (NRS) measurement between aerobic exercise and stretching exercise intervention group on the intensity of menstrualpain

Aerobic exercise are all activities that increase cardiac output and involve a large muscle group, such as walking, jogging, cycling or swimming. This exercise is done 3-6 days a week which usually begins with aerobic exercise for 10 minutes then slowly raised to 30-60 minutes. In terms of implementation, aerobic exercise is more complicated when compared with stretching exercise because in the implementation of aerobic exercise also performed stretching exercise for 5-10 minutes (M health , 2014). Stretching exercise is an effective exercise in improving flexibility, allowing for easier performing activities that require greater flexibility (Department of Health, 2012 ). In terms of execution time this exercise takes a shorter time of aerobic exercise that is 10-15 minutes and consists of 6 movements (Thermacare, 2009) .

The results above are in line with research conducted by Vaziri et al (2012), using two control groups and two intervention groups. The result of his research shows that there is no significant difference between the two groups. The method is effective in reducing the intensity of menstrual pain and the type of exercise has the same effect on primary dysmenorrhea, so women can choose one depending on their condition and interests.

Another related study is to compare exercise with other methods, such as research conducted by Chaudhuri et al (2013) that compares the impact between the use of warm water bottles with exercise. The results showed that the intensity of menstrual pain decreased significantly in the third month after the intervention, based on this study it can be concluded that the effect of exercise on menstrual pain occurs over time. Other research also related is research conducted by comparing the level of menstrual pain between respondents who do regular exercise with respondents who do not regularly, and the results obtained that exercise in a long time and regularly it will be effective in reducing menstrual pain (Maruf et al,2013).

Research other woods are compared between women with primary dysmenorrhea who do physical exercise more than an hour every day of her with women who have primary dysmenorrhea without exercise, and showed that the prevalence of dysmenorrhea was 39% in the exercise group and 61% in the control group (Dawood, 2006). The effect of exercise on menstrual pain is also influenced by the duration, type and intensity of exercise performed. Some researchers an show that exercise was effective in reducing the physical symptoms of menstrual pain, while other studies show that exercise that weighs less effective in addressing menstrual pain or correlation of its poor in overcoming painful menstruation, even a previous research on a group of women whodo strenuous exercise reported an increase in cases of dysmenorrhea 30% (Blakey,2010).

Exercise has been shown to be effective in treating menstrual pain in both aerobic exercise and

stretchig exercise, both methods have been shown to have a positive effect in decreasing the intensity of menstrual pain. Both methods also have advantages and disadvantages of each so that women can choose which method they prefer, but there is a need to be considered in terms of implementation, the exercise is done regularly is more effective than the irregular. So aerobic exercise and stretchig exercise can be one method that can be used as a woman to reduce menstrual pain that hefelt.

## CONCLUSION

Aerobic exercise effective in reducing menstrual pain, because based on statistical results obtained p value <0.001 ($p < 0.05$ ), so that could it was concluded that there was a significant difference between aerobic exercise and decreased intensity of menstrual pain.

Stretching exercise proved effective in reducing menstrual pain, because based on statistical results obtained p value <0.001 (p

< 0.05 ), so that could concluded that there is a significant difference between stretching exercise to decrease the intensity of menstrualpain.

No significant difference based on Numeric Rating Scale between groups who received an aerobic exercise intervention with the group receiving stretching exercise intervention on decreased intensity of menstrual pain. So both intentions are equally effective for decreasing the intensity of menstrual pain.

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# Knowledge Analysis and Attitudes of Midwifery Students of Universitas Andalas Faculty of Medicine about 1000 HPK related to Prenatal Period

**Fitrisia Amelin[1] , Erda Mutiara Halida[2], Adilla Zamri[3]**

[1]*Children's Health Sciences Section, Faculty of Medicine, M.Djamil Hospital, FK UNAND, Padang, Indonesia*
[2]*Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
[3] *Bachelor of Midwifery, Faculty of Medicine, Universitas Andalas, Padang, Indonesia*
fitirisiaamelin@med.unand.ac.id[1]

**Abstract**

The First 1000 Days of Life (conception to 2-year-olds) is a very important age range for brain and body development. The availability of qualified human resources becomes a determinant in the development of a nation which is one of the goals in shaping the golden generation in 2045. The purpose of this study is to examine the knowledge and attitudes of midwifery undergraduate students at the Universitas Andalas Medical School about 1000 HPK related to prenatal period. This study uses a comparative analytic method with cross sectional design, carried out in the Midwifery Bachelor Study Program at the Faculty of Medicine, Universitas Andalas in August 2019. The research subjects were 62 semester 2 and 6 semester midwifery students. Data collection by observation and questionnaire. Univariate and bivariate data analysis used *Chi square* with *p-value* ,
≤0,05. The results showed the knowledge of female students in semester 2 and semester 6 was at a high level. Significantly the semester 6 knowledge (96.8%) was higher than the semester 2 students (54.8%). Second semester students (61.3%) had a lower positive attitude than 6th semester students (93.5%). The results of the bivariate analysis showed that there were differences between the knowledge of female college students in semester 2 and semester 6 (p = 0.001), and attitude (p = 0.005). Where there is no relationship between the level of knowledge and attitude (p = 0.082). From the bivariate analysis, it was found that there was a difference between the knowledge and attitudes of female students in semester 2 and semester 6 about 1000 HPK related to the prenatal period. It is expected that this research can be a reference and evaluation of material specifications for 1000 HPK, especially in the prenatal period.

**Keywords** : Knowledge, Attitude, Prenatal, 1000 HPK

## INTRODUCTION

The preparation of a good and high-quality family generation with a high population growth rate is one of the goals in shaping the golden generation in 2045. The availability of quality human resources is decisive in the development of a nation, such as having strong physical, strong mental, healthy health. excellent and good cognitive, where it is all determined by nutritional status since the early growth period, which starts from the first 1000 days of life (Yulizawati *et al*2016).
Trends in the nutritional status of children under five in Indonesia according to Nutrition Status Monitoring (PSG), the prevalence of underweight children in Indonesia from 2014 to 2017, where the prevalence of *underweight* (19.3%,18.8%,17.8%,and17.9%, sequentially), *stunting* (28.9%,29%,
27.5%, and 29.6%, respectively) and *wasting* (11.8%, 11.9%, 11.1%, and 9.5% , sequentially) which is still a public nutrition problem. Based on Data (2017) of the Health Office of West Sumtera Province, there is a stunting prevalence of around 36%, the figure is above the national figure, that number is also

above the maximum tolerance for stunting set by the WHO at20%. Lack of nutrition in the first 1000 days of life will result in cognitive development, which can reduce productivity and competence during adulthood, but if this period has certain qualities, it will improve the quality of life and the formation of a healthy and strong generation, so that we can achieve the purpose of the "Indonesia Prima" program (Yulizawati *et al*2016).

The role of women as expectant mothers is very important in maintaining family health, especially in infants and children who are generally still in the care of their mothers. Where the growth and development of children has begun since the child is in the womb. Pregnancy is the first and most important step in ensuring optimal nutritional intake for the next 1000 days, up to 2 years old.

The movement to save 1,000 HPK is a national goal to break the chain of maternal and child health problems. This big fire certainly involves several sectors and professions, especially in the health sector, one of which is the midwife profession. Midwives as the spearhead of health development directly related to mothers can be a supporting or driving factor for the success of goals in the 1000 HPK program (Lamere,2013).

S1 midwifery students as prospective midwives who will deal directly with women as prospective mothers must understand the role and function of midwives in 1000 HPK. Midwives as professionals are expected to be able to provide integrated services within 1000 HPK. In providing care to clients, guided by the philosophy of midwifery so as to achieve service quality (ICM, 2011).

Increased knowledge and attitudes of midwifery undergraduate students about 1000 HPK related to prenatal period is expected to be a provision of knowledge in carrying out their role as a midwife, which can make a woman pay attention to her nutrition during conception to pregnancy, in order to produce a generation of good quality in terms of physical, health andmentally.

Based on this research was conducted to study the knowledge and attitudes of the Midwifery Bachelor of Medicine Faculty of Universitas Andalas about 1000 HPK related to the prenatalperiod

**METHOD**

This study uses a *comparative* analytic method with *cross sectional* approach. Data collection was conducted in August 2019. The population in this study was conducted purposively, namely female students in semester 2 andsemester

6. The number of samples in this study was 62 respondents. Sampling is done by *stratified random sampling* technique. Data processing was performed by *chi-square* test ($p < 0.05$) using SPSS 17 software.

## RESULT

**Characteristics of Respondents Tabel 1. Student Characteristics**

| Student Characteristics | SEMESTER2 f | % | SEMESTER6 f | % |
|---|---|---|---|---|
| | n=31 | | n=31 | |
| **Age** | | | | |
| 18 | 8 | 25,8 | 0 | 0 |
| 19 | 19 | 61,3 | 0 | 0 |
| 20 | 4 | 12,9 | 5 | 16,1 |
| 21 | 0 | 0 | 20 | 64,5 |
| 22 | 0 | | 6 | 19,4 |
| **Origin** | | | | |
| Padang | 8 | 25,8 | 10 | 32,3 |
| OutsidePadang | 23 | 74, | 21 | 67,7 |
| **BesarKeluarga** | | | | |
| Small (≤4 people) | 7 | 22,6 | 7 | 22,6 |
| Medium (5-6 people) | 18 | 58,1 | 18 | 58,1 |
| Large(>7people) | 6 | 19, | 6 | 19,4 |
| **Father'sEducation** | | | | |
| Elementary(SD-SMP) | 5 | 16,1 | 4 | 12,9 |
| Intermediate(SMA) | 10 | 32,3 | 12 | 38,7 |
| Height(PT-S3) | 16 | 51, | 15 | 48,4 |
| **Mother'sEducation** | | | | |
| Elementary(SD-SMP) | 2 | 6,5 | 2 | 6,5 |
| Intermediate(SMA) | 18 | 58,1 | 13 | 41,9 |
| Height(PT-S3) | 1135, | | 16 | 51,6 |

Tabel 1 shows the age distribution of respondents ranged between ages 18-22 years. Most of the female students come from outside the city of Padang with a large category of family. The majority of parents' last education is at the college level.

**Univariate Analysis**

**Tabel 2. Distribution of 1000 HPK Knowledge Frequencies related to Prenatal Period for Midwifery Bachelor**

| | Level ofeducation | | | |
|---|---|---|---|---|
| HPK | SEMESTER2 f | % | SEMESTER6 f | % |
| PrenatalPeriod | n=31 | | n=31 | |
| **Reproductive Knowledge** | | | | |
| intermediate | 4 | 12,9 | 2 | 6,5 |
| hig | 27 | 87,1 | 29 | 93,5 |
| **Knowledge of Pregnancy** | | | | |
| intermediate | 10 | 32,3 | 0 | 0 |
| hig | 21 | 67,7 | 31 | 100 |
| **PHBS knowledge** | | | | |
| intermediate | 21 | 67,7 | 13 | 41,9 |
| high | 10 | 32,3 | 18 | 58,1 |
| **Know 1000 HPK (prenatal)** | | | | |
| interm diate | 14 | 45,2 | 1 | 3,2 |
| high | 17 | 54,8 | 30 | 96,8 |

Tabel 2. it was found that the knowledge of 1000 female college students' semester 2 (54.8%) was lower than that of the semester (96.8%). Both in the knowledge of reproductive health in semester 2 (87.1%) and semester 6 (93.5%), regarding pregnancy period in semester2(67.7%)and semester 6 (100%),

or in PHBS semester 2 (32.2)%) and semester 6 (58.1%)

**Tabel 3. Frequency Distribution of 1000 HPK Attitudes related to Prenatal Period in Midwifery Bachelor's Students**

| 1000HPKattitude | Level oteducation | | | |
|---|---|---|---|---|
| Prenatal Period | SEMESTER 2 | | SEMESTER 6 | |
| | f n=3 | % | f n=31 | % |
| **Reproductive Attitude** | | | | |
| Negative | 6 | 19.4 | 3 | 9.7 |
| Positive | 25 | 80.6 | 28 | 90.3 |
| **Pregnancy Attitude** | | | | |
| Negative | 8 | 25.8 | 3 | 9.7 |
| Positive | 23 | 74.2 | 28 | 90.3 |
| **PHBSattitude** | | | | |
| Negative | 11 | 35.5 | 2 | 6.5 |
| Positiv | 20 | 64.5 | 29 | 93.5 |
| **1000 HPK (prenatal)attitude** | | | | |
| Negative | 12 | 38.7 | 2 | 6.5 |
| Positiv | 19 | 61.3 | 29 | 93.5 |

Table 3 show is 61.3%) were positively lower compared to semester 6 students (93.5%). Good attitude about reproductive health where semester 2 (80.6%) and semester 6 (90.3%), gestational attitude during semester 2 (74.2%) and semester 6 (90.3%), attitude of PHBS semester 2 (64.5%) and semester 6 (93.5%).

**Bivariate Analysis**

**Tabel 4. Different Knowledge Levels of 1000 PPCs related to Prenatal Period for Midwifery Bachelor Students**

| Seme | Intermediate | | High | | Total | | OR | *p-* |
|---|---|---|---|---|---|---|---|---|
| ster | f | % | f | % | f | % | 95%CI | *value* |
| 2 | 14 | 45,2 | 17 | 54,8 | 31 | 100 | **24,706** | **0.001** |
| 6 | 1 | 3,2 | 30 | 96,8 | 31 | 100 | | |
| Total | **15** | **24,1** | **47** | **75,9** | 62 | 100 | | |

Tabel 4 shows that respondents with moderate knowledge had a greater percentage of semester 2 students(45.2%) compared to semester 6 (3.2%). This difference is statistically significant with a *p- value* of 0.001. Where semester 2 students haveariskof 24,706 times having moderate knowledge compared to semester 6 students.

**Tabel 5. Differences in 1000 HPK Attitudes related to Prenatal Period Midwifery Bachelor's Students**

| | Attitude | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Seme | Negative | | Positive | | Total | | OR | *p-* |
| ster | f | % | f | % | f | % | 95%CI | *value* |
| 2 | 12 | 38,7 | 19 | 61,3 | 31 | 100 | **9,158** | **0.005** |
| 6 | 2 | 6,5 | 29 | 93,5 | 31 | 100 | | |
| Total | **14** | **22,6** | **48** | **77,4** | 62 | 100 | | |

Tabel 5 shows that respondents with a negative attitude had a greater percentage of semester 2 students

(38.7%) compared to semester 6 (6.5%). This difference is statistically significant with a *p-value* of 0.005. Where semester 2 students have a risk of 9,158 times being negative compared to semester 6 students.

**Tabel 6. Relationship of Knowledge with 1000 HPK Attitudes related to Prenatal Period of Midwifery Bachelor Students**

| Pengetahuan | Atittude | | | | Total | | OR | *p-value* |
|---|---|---|---|---|---|---|---|---|
| | Negative | | Positive | | | | | |
| | f | % | f | % | f | % | 95%CI | |
| Intermediate | 6 | 9,6 | 9 | 14,5 | 15 | 24,1 | **3,250** | **0.082** |
| High | 8 | 13 | 39 | 62,9 | 47 | 75,9 | | |
| Total | **14** | **22,6** | **48** | **77,4** | 62 | 100 | | |

Tabel 6 shows that respondents have a positive attitude, with high knowledge amounting to 62.9% compared to medium knowledge which is equal to 14.5%. The *p- value* of 0.082 indicates that there is no significant relationship between knowledge and the attitude of 1000 HPK. Where respondents with high knowledge have 3,250 times the risk of having a positive attitude compared to a negative attitude.

**RESULTS UnivariateAnalysis**

Respondents who participated in this study were undergraduate students of Midwifery Study Program in semester 2 and semester 6 with a range of ages 19-22 years. According to the Ministry of Health (2009) ages 19-22 years are included in the late adolescent age group. At this time adolescents are stable and begin to understand the direction of their lives and realize their purpose in life. Teenagers also have a certain stance based on a clear pattern that has just been discovered (Rahayuningsih,2008).

In this study the most respondents were at the age of 20 years with as many as 64.5%. Besides seeing from the data available that the most respondents came from outside the field (74.2%). In Notoatmodjo (2007) said, regional origins can affect a person's culture and norms. Socio-cultural systems that exist in society can influence the attitude in receiving information. The culture in which a person lives and is raised has a great influence on his knowledge.

Large family respondents in this study were also divided into 3 categories where small (≤4 people), moderate (5-6 people), and large (≥7 people) (Hurlock 1994). According to Sanjur (1982) in Sukandar (2007), explaining family beser is the number of family members consisting of fathers, mothers, children and other family members who live from the same resource management. In this study respondents were generally classified as moderate family groups(58.1%).

The family is very decisive in providing primary information because the amily is the first and foremost educational institution. The formation of attitudes epends on the family and culture in which he individual was raised. More family members living with someone are expected to have more role models and lead to better attitudes. Role models will be the people whose approval for each movement, behavior, person who does not want to be disappointed, and has a special meaning. Generally a person will have an attitude that is aligned (conformist) with people who are considered important (Rahayuningsih,2008).

The level of education is determined based on the level of development, educational goals achieved, the ability of students developed, formal education levels consisting of basic education (elementary / junior high), secondary education (high school), and tertiary education (S1 / S2 / S3) (Anis Muniroh , 2016). In this study, fathers (51.6%) and mothers (35.5%) of semester 2 students generally completed their education up to college and father (48.4%) and mothers (51.6%) in semester 6 students.

According to Yadeta *et al*. (2014), parents who have positive knowledge and attitudes about reproductive

health will discuss 6 times more about reproductive health with their children than those with low knowledge and negative attitudes. The role of the mother is very necessary in the period of pregnancy and the early stages of parenthood so that women who have just given birth can care for their babies well after giving birth (Toity *et al*.2008).

**Knowledge Analysis**

From the knowledge level analysis it was found that the second semester female respondents had a high level of knowledge (54.8%) regarding 1000 HPK related to prenatal period. 1000 HPK knowledge related to the prenatal period that is evaluated consists of three components, namely reproductive health, pregnancy period and clean and healthy lifebehavior.

Knowledge about reproductive health is an understanding of all aspects related to reproduction so that humans can enjoy and run their sexual lives with healthy and safe processes and reproduction (Rejeki,2010).

In this study, knowledge about reproductive health in general can be seen that semester 6 students (93.5%) and second semester students (87.1%) have a high level of knowledge. This is allegedly because the 6th and 2nd semester students have received an education curriculum on reproductive health in the Block 1C midwifery curriculum on Biomedics 2 and in Block 2 C regarding adolescent health and pre conception, so that respondents' understanding of reproductive health is good.

In this study, knowledge about reproductive health in general can be seen that semester 6 students (93.5%) and second semester students (87.1%) have a high level of knowledge. This is allegedly because the 6th and 2nd semester students have received an education curriculum on reproductive health in the Block 1C midwifery curriculum on Biomedics 2 and in Block 2 C regarding adolescent health and pre conception, so that respondents' understanding of reproductive health is good.

Pregnancy is the period from which conception begins until the fetus is born. the duration of normal pregnancy is 280 days (40 weeks or 9 months 7 days) calculated from the first day of the last menstruation (Prawirohardjo, 2008). In this study, semester 2 students (67.7%) had a high level of knowledge regarding pregnancy.

According to Ginting and Wantania (2011) more than 50% of pregnant teenagers (aged 14-19 years) have insufficient knowledge about pregnancy. This shows that teenagers do not fully understand pregnancy well. While 6th semester students (100%) have a high level of pregnancy knowledge.

Lack of understanding of aspects of pregnancy can also occur due to lack of attention to aspects of pregnancy, so that the aspects of pregnancy that should be known are considered less important because they feel they are not in the position (already married or already pregnant). Lack of understanding of aspects of pregnancy such as nutritional and non- nutritional aspects will refer to the poor quality of the fetus or baby to be born (Almatsier *et al*.2011).

Knowledge of PHBS of respondents was measured by multiple choice questions or closed questions as many as 10 questions about the correct place of delivery, exclusive breastfeeding, weighing time for toddlers, use of clean water for daily activities, clean water characteristics, use of healthy latrines, frequency of fruit consumption and vegetables, physical activity, and smoking.

In this study, it can be seen that the majority of female students of semester 2 (67.7%) have a moderate level of PHBS knowledge. The 6th semester students (58.1%) have a high level of PHBS knowledge. The lack of knowledge related to PHBS is allegedly due to the absence of a midwifery S1 curriculum that specifically addresses household PHBS. Slightly contrary to research according to Kurniawati (2011), where young women (57.8%) have a sufficient level of PHBS knowledge, which shows that teenagers already understand my life is clean and healthy that isgood.

Based on the results of this study, an analysis found that the knowledge of 1000 HPK overall in semester 2 (54.8%), and semester 6 (96.8%) had a high level of knowledge.

Statistical test results using the Chi- Square test showed the value of $p = 0.001$ ($p < 0.05$). So it can be concluded that there is a significant difference between the knowledge score of 1000 HPK related to

prenatal period in semester 2 students and the knowledge score of 1000 HPK related to prenatal period in semester 6students.

In line with the statement of Mubarak et al (2007), that education means guidance given by someone to others on a matter so that they can understand. It is undeniable that the higher a person's education, the easier it is for them to receive information and ultimately the more knowledge they have, on the contrary if someone's level of education is low, it will hinder the development of one's attitude towards acceptance, information and values that are just introduced.

**Attitude Analysis**

In this study semester 2 students (80.6%) had a lower positive attitude compared to semester 6 students (90.3%). According to Ayu (2013) 66.7% of young women have positive reproductive health attitudes. A positive attitude towards reproduction will have an impact on behavioral tendencies to maintain reproductive health well in the context of early prevention of diseases related to reproductive health.

As a student with a major in the science of pregnancy nutrition is expected to have a positive and good attitude related to aspects of pregnancy. Where in this study semester 2 students (74.2%) also had a lower positive attitude compared to 6th semester students (90.3%) regarding attitudes during pregnancy. The 6th semester students have a higher positive attitude because they have gone through an education process and gained knowledge about nutrition aspects during pregnancy from the midwifery courses curriculum to the final level. In addition, the 6th semester student group is nearing the age to be married enough, namely 22 years (BKKBN 2011).

In this study, it was seen that semester 2 students (64.5%) had a low positive attitude compared to semester 6 students (93.5%) towards PHBS. According to Tondang and Nasution (2012) 100% of young women have a positive attitude regarding clean and healthy life behavior. It also shows that the positive attitude of the two respondents will influence the behavior of the respondents later related to healthyliving.

Based on the results of research that has been carried out on midwifery S1 and 6th semester students of the Faculty of Medicine at Universitas Andalas, a significant value of the chi square test results obtained, the value of $p = 0.005$ ($p < 0.05$). So it can be concluded that there is a significant difference between the attitude score of 1000 HPK related to prenatal period in semester 2 students and semester 6students.

According to Azwar (2005), personal experience, the influence of others who are considered important, the influence of culture, mass media, educational institutions and religious institutions, as well as emotional factors greatly influence one'sattitude.

According to Haryanto (2002) nutritional attitude is the assessment or opinion of a person how to maintain and behave in a healthy life and this attitude is obtained from the experience of one's own and other people who are closest to him. To turn the attitude into an act, supporting factors are needed including adequate facilities and support from various parties, both the family and other parties such as support from health workers.

In this study shows that there is no relationship between the level of knowledge with the attitude of 1000 HPK related to prenatal period. Where the statistical test results obtained from the statistical value of $p = 0.082$ ($p > 0.05$). This shows that not necessarily people who lack knowledge also have negativeattitudes.

Based on research conducted, compared with research in Sudan, where respondents have a positive attitude despite having relatively low knowledge. This is caused by the environment that is lacking in providing information (Eldalo, 2013).

Contrary to research by Handayani (2015) which states that there is a significant relationship between the level of knowledge about sex with the attitudes of students of SMAN 1. Sometimes the attitude towards premarital sex, even though the closeness of the relationship is declared weak.

Knowledge is a predisposing factor for attitude change. When students have knowledge, they are more

likely to behave better toward their knowledge, but this is not absolute, because with the knowledge students have, they will do innovations that are sometimes good and sometimes bad, according to the outward nature of humans who are never satisfied and always want to try new. At the individual level, knowledge and beliefs affect health-related actions, including actions about 1000 HPK (Sawalha, 2008; Widayati *et al*. 2011).

## CONCLUSIONS

1. Most of the second semester students have high knowledge with a positive attitude towards 1000 HPK related to prenatal period.
2. Most of the 6th semester students have high knowledge with a positive attitude towards 1000 HPK related to prenatal period.
3. There is a difference in the level of knowledge and attitudes between semester 2 students and semester 6 students about 1000 HPK related to prenatal period.
4. There is no relationship between knowledge and the attitude of respondents to 1000 HPKs related to prenatal period.
5. Knowledge is only a predisposing factor to the attitudes of respondents.

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